



SFUND RECORDS CTR

2166-03034

MANUFACTURERS AN, MS AND SPECIAL FITTINGS  
"SPECIALISTS IN STAINLESS STEEL  
and EXOTIC ALLOYS"

11643 VANOWEN STREET, P.O. BOX 3097 • NO. HOLLYWOOD, CA 91609-0097 • (818) 765-4992 • TWX 910-499-2672 • FAX 818-503-9708

January 16, 1992

Chris Stubbs  
South Coast Groundwater Section (H-6-4)  
United States Environmental Protection Agency  
P.O. Box 193036  
San Francisco, CA 94119-3036

RECEIVED

JAN 21 1992

PRC ENVIRONMENTAL  
MANAGEMENT, INC.

Ref: File No. 111.0078

Enclosed is the information asked for in USEPA letter  
dated December 16, 1991.

Sincerely,

Robert Kahmann  
General Manager

000080



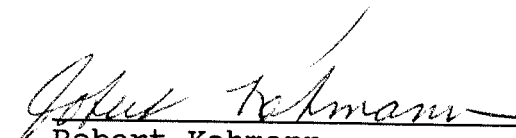
MANUFACTURERS AN, MS AND SPECIAL FITTINGS  
"SPECIALISTS IN STAINLESS STEEL  
and EXOTIC ALLOYS"

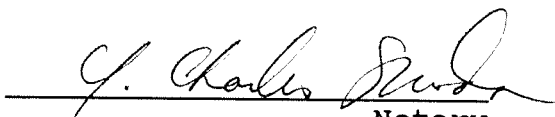
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January 15, 1992

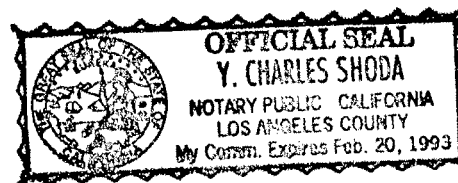
Ref: File # 111.0078

A diligent record search has been completed and a diligent interview of present or former employees has been conducted. All information has been forwarded to the EPA.

  
Robert Kahmann  
General Manager

  
Notary

WITNESSED JAN. 16, 1991



**ANSWERS TO EPA QUESTIONS**

page 1 of 3

1. EPA I.D. # CAL000027854
2. In early 1957 the current facility was constructed; Allan Aircraft Supply Company is the only business that has occupied the site. The operation consists of manufacturing, testing, and storage of Aerospace fittings.
3. Current owner: Mrs. Vera Hunt  
FX-6 Personal Privacy

No longer a lease - we are on a month-to-month with a one year notice.

4. In 1957 the property was owned by J. Wake Hunt, whose address at that time was 11817 Vose St. N. Hollywood.
5. There are no previous lessees or operations at 11643 Vanowen St. after 1957.
6. See plot map from Smith-Emery Company.
  - a) The facility currently consists of two one-story buildings. The southern building consists of office space, storage areas, a quality control area, and a shop area for grinding and finishing parts. The northern building consists of warehouse space, a machine shop for manufacturing, and quality control areas. The space between the two buildings contains a compressor, scrap metal bins, and four above ground polypropylene tanks (approximately 250 gallons each) used to store wastewater and water soluble coolants.
  - b) There are no underground structures on the property. There are no underground drain lines.
  - c) There are no wells on the property to the best of our knowledge.
  - d) Storm water drains off the property to the city storm drain system. The facility is connected to the city sewer system for sanitary sewage disposal. No subsurface disposal method has ever been employed by this facility.

page 2 of 3

(6. cont.)

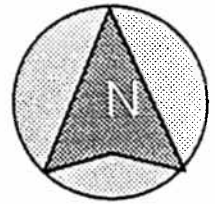
- e) Degreasing unit is disconnected and wrapped but not yet removed. Tower and pipes have been removed. Has not operated with Trichloroethane since approx 1981-1982.
- 7. Only known documents are:  
SCAQMD permit P37405 to operate degreaser.  
(see attached)
- 8. a,b,c) See attached SECO report no. G-91-6594.  
d) Borings were completed January 13, 1992
- 9. No. Allan Aircraft Supply Company is the only business that has ever operated from this site. Prior site usage was most likely residential, based on the surrounding land use before the 1950's.
- 10. No. no knowledge of hazardous substance disposal was available when Allan Aircraft began operations in 1957. There are no records available at the City of Los Angeles Department of Building and Safety relating to the previous site usage.
- 11. Yes. See attached list of materials, recycle reports, and Hazardous Material Manifest.  
  
The attached list of materials is from Dec 1991 back thru 1984 where our records end. The Baron degreaser was installed in 1969-1970 and operated until approximately 1981 using III Trichloroethane. Trichloroethane was supplied by Oil and Solvent Process Co. They also picked up all used Trichloroethane for reprocessing. See Hazardous Material Manifest. During 1981 we converted to Blue Gold, a non-hazardous compound. We have not operated the degreaser with Trichloroethane since 1981, but we have kept the permit active in case our operation changed. It has not and we have put the degreaser in storage.
- 12.
  - 1. 1990. The hose filling a holding tank with water soluble coolant slipped out of the tank and discharged approximately 10 gallons onto the asphalt driveway. The coolant was Safety Cool 822C and water. It was immediately picked up with absorbing compound. The coolant was Non-Hazardous.



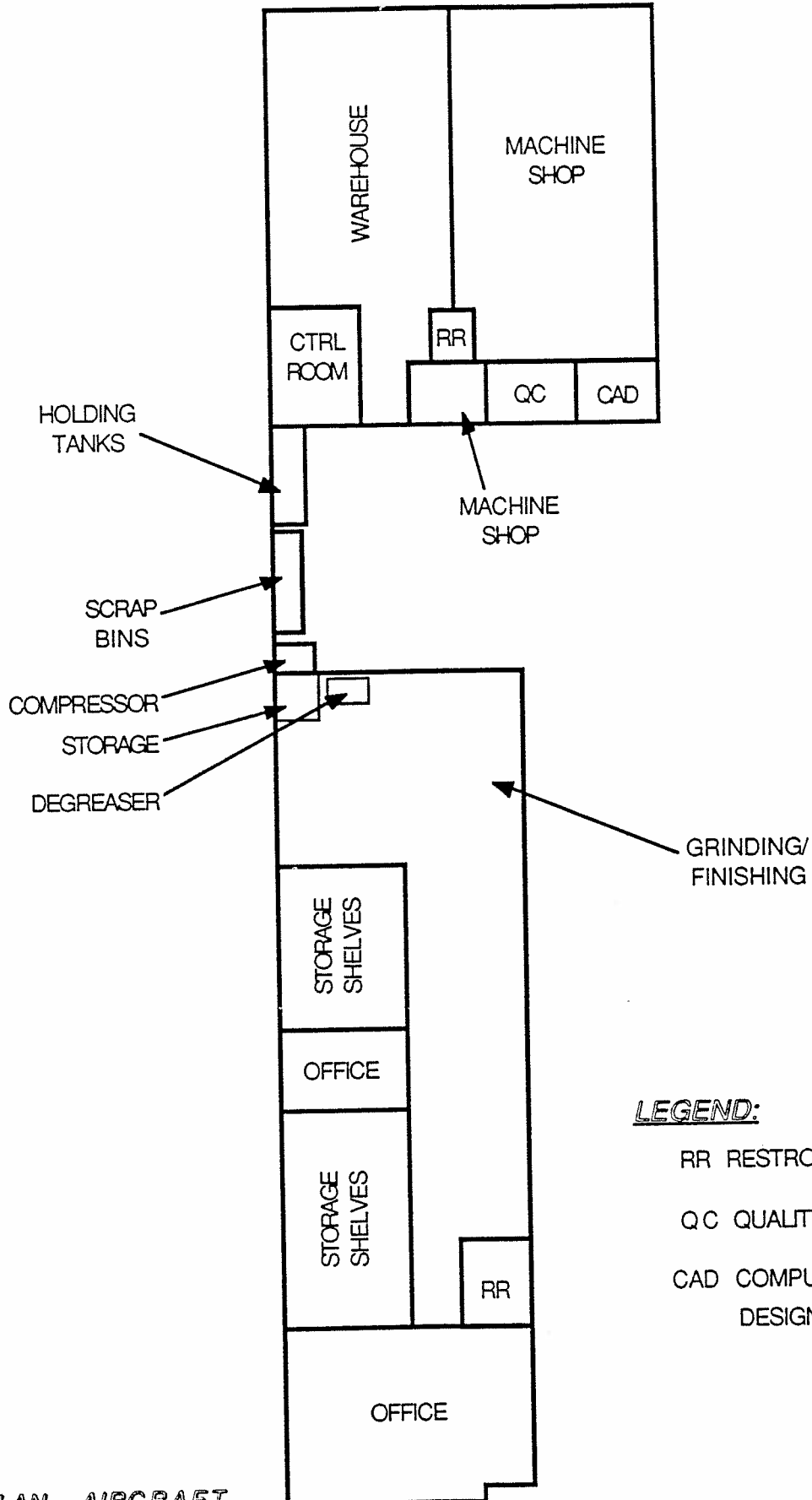
(12. cont.)

2. 1991. The metal gutter used to catch the drops of water soluble coolant coming from the scrap bins broke, allowing less than 1 quart to drip onto the asphalt. The coolant was picked up with absorbing compound. The metal gutter was replaced with cement gutter filled with absorbing compound. The coolant was Non-Hazardous.
  - i. Persons with knowledge of this are:
    - 1) Dan Terrones - Warehouse Manager
    - 2) Jack Barker - Production Manager
13. There are no underground structures on the property.
14. Yes. The facility has been connected to the Los Angeles system since construction in 1957. The system is used for disposal of sanitary wastes and potable water, as well as normal household wastes.
15. There is no record of acts or omissions by others
16. There are no subsidiaries or parent companies.
17. No articles or by laws exist.
18. SIC code 3494
19. None other
20. See attached copies of permits.
21. Warehouse at 11815 Vose St. N. Hollywood, CA since approx 1984

ALLEY



SCALE: 1"=40'



**LEGEND:**

RR RESTROOMS

QC QUALITY CONTROL

CAD COMPUTER AIDED  
DESIGN AREA

**ALLAN AIRCRAFT**

11643 VANOWEN STREET  
NORTH HOLLYWOOD, CALIFORNIA

S.E.CO NO. 24070

**PLOT PLAN**

**SMITH-EMERY COMPANY**  
TECHNICAL ILLUSTRATION BY A.C.H.

PLATE NO.: 2



# PERMIT TO OPERATE

P37405

Sector WB

operation under this permit must be conducted in compliance with all data and specifications included with the application under which this permit is issued. The equipment must be properly maintained and kept in good operating condition at all times. In accordance with Rule 10(c), this Permit to Operate must be posted or accessible.

LEGAL OWNER: ANDERSON KAHMANN AND ROBERT A. BONHAM, DBA  
 OPERATOR: ALLAN AIRCRAFT SUPPLY COMPANY

Appl. No. A-57908

EQUIPMENT LOCATED AT: 11643 VANOWEN STREET  
 NORTH HOLLYWOOD, CALIFORNIA

SOUTH COAST  
 AIR QUALITY MANAGEMENT DISTRICT

CERTIFIED COPY *Barris & Bailey*

EQUIPMENT DESCRIPTION AND CONDITIONS: DEGREASER, BARON VAPOR-SPRAY TYPE, MODEL DB-425G, 2'-6" W. x 4'-0" L. x 4'-9" H.,  
 SERIAL NO. D-5820, GAS FIRED, WITH A 1/3 H.P. PUMP.

## CONDITION

THIS EQUIPMENT MUST NOT BE OPERATED IN A MANNER WHICH RESULTS IN THE DISCHARGE INTO THE ATMOSPHERE IN ANY ONE DAY OF MORE THAN 40 POUNDS OF ORGANIC MATERIALS FROM THE USE OF PHOTOCHEMICALLY REACTIVE ORGANIC SOLVENTS UNLESS SUCH DISCHARGE IS CONTROLLED SO AS TO COMPLY WITH RULE 66.

This permit does not authorize the emission of air contaminants in excess of those allowed by Division 20, Chapter 2, Article 3, of the Health and Safety Code of the State of California or the Rules and Regulations of the Air Pollution Control District. This permit cannot be considered as permission to violate existing laws, ordinances, regulation or statutes of other governmental agencies.

Filing fee only - total cost of permit - filing fee paid  
 VALIDATION NUMBER 8169169169 December 10, 1969.

AIR POLLUTION CONTROL OFFICER

*Beth Malin*  
 Beth Malin, Permit Section  
 DATE March 25, 1970



South Coast  
AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 9150 FLAIR DR., EL MONTE, CA 91731

JULY 18, 1991

ID - 023521  
ALLAN AIRCRAFT SUPPLY CO  
11643 VANOWEN ST.  
NORTH HOLLYWOOD CA 91605-6128

PERMIT RENEWALS

PERMIT NUMBER	DESCRIPTION	APPLIC NUMBER	EXPIRATION DATE
P37405	DEGREASER TRICHLOROETHYLENE <=1 LB/D VOC	A57908	07/01/92



South Coast  
AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 9150 FLAIR DR., EL MONTE, CA 91731

JULY 18, 1991

ID - 023521  
ALLAN AIRCRAFT SUPPLY CO  
11643 VANOWEN ST.  
NORTH HOLLYWOOD CA 91605-6128

OFFICIAL DOCUMENT

ANNUAL VALIDATION OF PERMIT TO OPERATE

DEAR PERMIT HOLDER:

THIS LETTER IS THE OFFICIAL NOTICE OF RENEWAL AND ACKNOWLEDGEMENT OF PAYMENT FOR THE ATTACHED LIST OF PERMIT(S) TO OPERATE. OPERATION UNDER THIS LETTER AND THE PERMIT(S) WHICH IT RENEWS MUST BE CONDUCTED IN COMPLIANCE WITH ALL INFORMATION INCLUDED WITH THE INITIAL APPLICATION AS WELL AS THE INITIAL PERMIT CONDITIONS. THE EQUIPMENT MUST BE MAINTAINED AND KEPT IN GOOD CONDITION AT ALL TIMES. UNLESS OTHERWISE SPECIFICALLY STATED, THE ORIGINAL PERMIT TO OPERATE REMAINS IN FULL FORCE AND EFFECT, AND MUST BE RETAINED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT.

FOR FURTHER INFORMATION, OR IF YOU HAVE ANY QUESTIONS REGARDING THIS LETTER, PLEASE CALL CUSTOMER SERVICE AT (818) 307-2200.

SINCERELY,

JAMES M. LENTS, PH.D.  
EXECUTIVE OFFICER

RENEWAL(S) ATTACHED

THIS CERTIFICATE MUST BE POSTED AT PLACE OF BUSINESS

# CERTIFICATE OF DISCLOSURE OF HAZARDOUS SUBSTANCES

CITY OF LOS ANGELES

ISSUED: 10-10-91

ACCOUNT NO.	FUND	CLASS	DESCRIPTION	STARTED
455319-89	F	802	HAZ INIT DISCL/FEE/C	10-08-91

THIS CERTIFICATE IS DUE AND PAYABLE NOVEMBER 1ST EACH YEAR, AND IS DELINQUENT IF NOT PAID ON OR BEFORE DECEMBER 31ST EACH YEAR.

ISSUED TO

S BONHAM/A KAHMANN  
11043 VANOWEN ST.  
N HOLLYWOOD CA 91609

BY:

*Donella...*

CHIEF ENG./GEN. MGR.

THIS CERTIFICATE IS GOOD UNTIL VOIDED OR REVOKED. IT BECOMES VOID UPON ANY CHANGE OF OWNERSHIP OR LOCATION.

NOTIFY THE CITY CLERK IN WRITING OF ANY CHANGE IN OWNERSHIP OR ADDRESS—ROOM 101, CITY HALL, LOS ANGELES, CALIF. 90012  
FORM 2002-H  
IMPORTANT - READ REVERSE SIDE



# SMITH-EMERY COMPANY

The Full Service Independent Testing Laboratory, Established 1904

781 East Washington Blvd.  
Los Angeles, California 90021  
(213) 749-3411  
Fax (213) 746-7228

November 16, 1991

SECo File No. 24070  
SECo Report No.: G-91-6594

California Regional Water Quality Control Board  
Los Angeles Region  
101 Centre Plaza Drive  
Monterey Park, CA 91754-2156

Attention: Ms. Ann Zaskodna

SITE ASSESSMENT WORK PLAN  
Allan Aircraft Supply Company  
11643 Vanowen Street  
North Hollywood, California

## INTRODUCTION

As per your request, we are providing this work plan for a site assessment for the above referenced property. The location of the property with respect to the surrounding area is shown on the Vicinity Map, Plate 1. The scope of work presented here is based on the Regional Water Quality Control Board (RWQCB) letter to Allan Aircraft Supply Company of August 15, 1991, our professional experience, and review of the RWQCB "Workplan Requirements for Initial Subsurface Engineering/Geologic Soil Investigation (Well Investigation Program)".

Anaheim

3427 East La Palma Ave.  
Anaheim, California 92807  
(714) 693-1026  
Fax (714) 693-1034

San Francisco

Hunters Point Shipyard, Bldg. 114  
P.O. Box 880550  
San Francisco, California 94188  
(415) 822-8880  
Fax (415) 822-5864

# SMITH-EMERY COMPANY

## HISTORICAL INFORMATION

### General

The subject property currently consists of a one-story metal parts manufacturing facility, some office space, asphalt parking areas, and an above ground waste storage area. The area of concern is shown on the Plot Plan, Plate 2. According to Mr. Jack Barker of Allan Aircraft, this is an area where above ground tanks containing diluted wastewater and coolant oils are located. Another potential concern is a vapor degreasing unit that initially used tetrachloroethylene (PCE) as a solvent; however, according to Mr. Barker the use of PCE was discontinued in the mid to late 1970's. The major chemicals currently used on site are water soluble synthetic oils, non hazardous degreasing soaps, and alcohols.

### Building Permit Review

Building permits for the property at 11643 Vanowen Street were reviewed at the City of Los Angeles Department of Building and Safety. The building history and occupancy of the site, as far as can be determined from available documentation is described as follows.

The earliest document on file is a report on compacted fill prepared by the Donald R. Warren Company on February 19, 1957. According to this document, the property is legally described as Lot 26 of the De Hougne Tract in the City of Los Angeles. The report also states



## SMITH-EMERY COMPANY

that three cesspools on the property were back filled with sand prior to construction on the site.

The City of Los Angeles sent a letter to the Donald R. Warren Company on March 1, 1957 approving these compacted fills.

An application to construct a new building was filed by J. Wake Hunt on February 27, 1957. The building is described as a single-story 60 foot by 200 foot structure to be used for aircraft parts sales. A certificate of occupancy was issued for this building on June 7, 1957. On February 6, 1958 a permit for alterations to the building also lists the owner as J. Wake Hunt. A remodeling permit dated March 23, 1959 lists J. Wake Hunt as the owner and gives the use of the building as warehouse and office space.

According to Building and Safety Department personnel, no additional information for the subject address or lot and tract number is on file at this agency. Based on this information and interviews with Allan Aircraft personnel it appears the only development on the site prior to the current occupant was most likely residential units.

### Underground Storage Tanks

Information concerning underground storage tanks on the subject property was requested from the Valley Division of the Los Angeles City Fire Department. According to personnel at this agency, no documentation was on file. Mr. Jack Barker, Allan Aircraft's

## SMITH-EMERY COMPANY

facility manager, states that no underground tanks have ever been used on the property to the best of his knowledge.

### Hazardous Materials Business Plans

A request for information on hazardous materials storage at the subject address was sent to the Hazardous Materials Unit of the Los Angeles City Fire Department. A business inventory list details the presence of the following hazardous materials:

<u>Substance</u>	<u>Maximum On Hand</u>	<u>Product Storage Type</u>
Denatured Alcohol	55 Gallons	Drums, Barrels, Carboys
Denatured Alcohol		
Ethyl Alcohol		
Methyl Alcohol		
Methyl Isobutyl		
Denatured Alcohol 90-95	55 Gallons	Drums, Barrels, Carboys
Ethyl Alcohol		
Methyl Alcohol		
Ethyl Acetate		
Methyl Isobutyl		

According to Mr. Barker, tetrachloroethylene (PCE) was formerly used on site as a degreasing agent. Due to increasing cost and regulatory compliance measures use of PCE was discontinued in the mid to late 1970's. Currently "Everclean Blue Gold" is used as a degreaser; according to information supplied by the manufacturer this substance is nonflammable and contains no hazardous components.

# SMITH-EMERY COMPANY

## INVESTIGATION WORK PLAN

The following procedure is proposed for use during this site assessment. As actual subsurface conditions encountered may vary, this plan may not hold for all possible conditions, but will be followed to the fullest extent possible. If field conditions necessitate changes to this plan the RWQCB will be notified immediately.

### Boring Program

We will implement the RWQCB requirements contained in their August 15th letter by drilling six borings with a hand auger. The borings will be in locations specified by the RWQCB as shown on the attached Plot Plan and will be a minimum of 10 feet deep. Samples will be obtained at one (1), five (5), and 10 feet and analyzed at Smith-Emery's state certified laboratory by EPA 418.1 for Total Petroleum Hydrocarbons (TPH) and 8260 for Volatile Organic Compounds. All samples will be archived and if the shallow analysis indicates contamination identical tests will be run on the deeper samples.

All samples will be obtained by means of a standard penetration sampler equipped with new 1.5 inch O.D. brass tubes and will be discrete and undisturbed. The tubes will be covered with Teflon sheeting and a close fitting plastic cap, labeled, and placed in a chilled, insulated cooler at 4 degrees Celsius for immediate transport to Smith-Emery Company's laboratory. Proper chain-of-custody forms will be utilized throughout sampling and transport.

## SMITH-EMERY COMPANY

All sampling and augering equipment will be washed with an Alconox solution between samples.

All cuttings and wash water will be placed in DOT 17H drums, sealed, labeled, and stored on site pending analytical results. The borings will be backfilled with bentonite chips prior to leaving the site.

### Analytical Program

We propose the following analytical schedule:

- 1) All one (1) foot samples will be analyzed for TPH by EPA 418.1
- 2) The five (5) foot samples in B-1 (tank area), B-3 (Storage shed) B-4 (degreaser), and B-6 (compressor) will be analyzed for volatile organics by EPA 8260. All other five (5) foot samples will be analyzed by EPA 418.1.
- 3) The 10 foot samples in B-2 (tank area) and B-5 (degreaser) will be analyzed by EPA 8260. All other 10 foot samples will be analyzed by EPA 418.1.

We believe this staggered analytical program will determine if any hydrocarbon or solvent contamination has penetrated the subsurface. To define vertical extent any samples deeper than samples that return positive 8260 results will also be analyzed by EPA 8260. Care will be taken that EPA holding times are not exceeded.

# SMITH-EMERY COMPANY

## HYDROGEOLOGY

The subject property is located at an elevation of approximately 715 feet above sea level (USGS Van Nuys Quadrangle, 1972). The property is asphalt capped and sloped to allow stormwater to run off onto Vanowen Street. Directly opposite the facility on the south side of Vanowen Street is a groundwater extraction well. The following information regarding this well was reported by the Los Angeles County Department of Public Works, Hydrologic Records Division:

<u>Well Number</u>	<u>Date Measured</u>	<u>Depth to Water</u>	<u>Elevation of Well Head</u>
3810	4-18-91	230.6 ft	713.3 ft

As the RWQCB has stipulated a shallow (10') depth for all borings, no groundwater is expected to be encountered during this investigation. Local groundwater flow is towards the extraction well. Recharge is limited to runoff percolation from the Verdugo Mountains to the northeast.

## REPORT AND SCHEDULE

After evaluation of the analytical results, a report will be submitted to the RWQCB as detailed in the "Report Content" attachment. As this investigation is being conducted to obtain samples for analysis, it is exempt from air monitoring requirements under South Coast Air Quality Management District Rule 1166, as detailed in paragraph (d) (1) (C) of that rule. The report will be completed approximately three weeks after samples are obtained.

## SMITH-EMERY COMPANY

Field work will begin within 14 days of the approval of this workplan and RWQCB personnel will be given 10 days notice prior to the start of field operations.

### QUALITY ASSURANCE/QUALITY CONTROL

A field blank consisting of a brass tube containing clean #20 silica sand will be prepared and will accompany the sample tubes to the job site and then to the laboratory. The blank will be analyzed by EPA 418.1 for Total Petroleum Hydrocarbons and EPA 8260 for Volatile Organic Compounds.

The final report will include laboratory quality control information including calibration check standards and matrix spike duplicates.

If you have any comments or questions regarding this work plan we look forward to talking with you about them. We can be reached at 213/749-3411, ext. 373 and Fax 213/746-7228.

Respectfully submitted,

SMITH-EMERY COMPANY



BRIAN PRIMEAU  
Environmental Assessor

Reviewed and Approved by



LUTZ KUNZE, R.G.E. 493  
Vice President

Enclosures: Report Contents

BP:LK/ss

# SMITH-EMERY COMPANY

## REPORT CONTENTS

A report shall be submitted to the RWQCB containing:

1. Plot plan to scale showing locations of borings, sampling points, buildings, adjacent streets and north arrow.
2. Description of methods for obtaining, handling, and transporting samples.
3. Time and date samples were obtained.
4. Boring logs certified by a California Registered Geologist, California Certified Engineering Geologist, or California Registered Civil Engineer with sufficient experience in soils.
5. Chain-of-custody documentation initiated by person obtaining sample through person at State Department of Health Services certified laboratory.
6. Analysis results by a State certified laboratory submitted on laboratory letterhead showing analysis date, methods, and detection limits.
8. Documentation as to depth of groundwater at facility with comments on the potential for contamination.
9. Report to be signed by California Registered Geologist, California Certified Engineering Geologist, or California Registered Civil Engineer with sufficient experience in environmental work.
10. Any observations of site contamination and analytical results which may be pertinent.



SCALE: 1" = 2000'



REFERENCE:

U.S.D.I. - GEOLOGICAL SURVEY  
VAN NUYS QUADRANGLE  
LOS ANGELES COUNTY, CALIFORNIA

FILE NO.: 24070

## VICINITY MAP

**ALLAN AIRCRAFT**  
**11643 VANOWEN STREET**  
**NORTH HOLLYWOOD, CALIFORNIA**

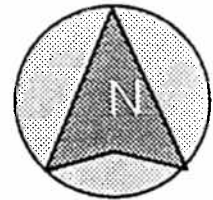
**SMITH-EMERY COMPANY**

TECHNICAL ILLUSTRATION BY A.C.H.

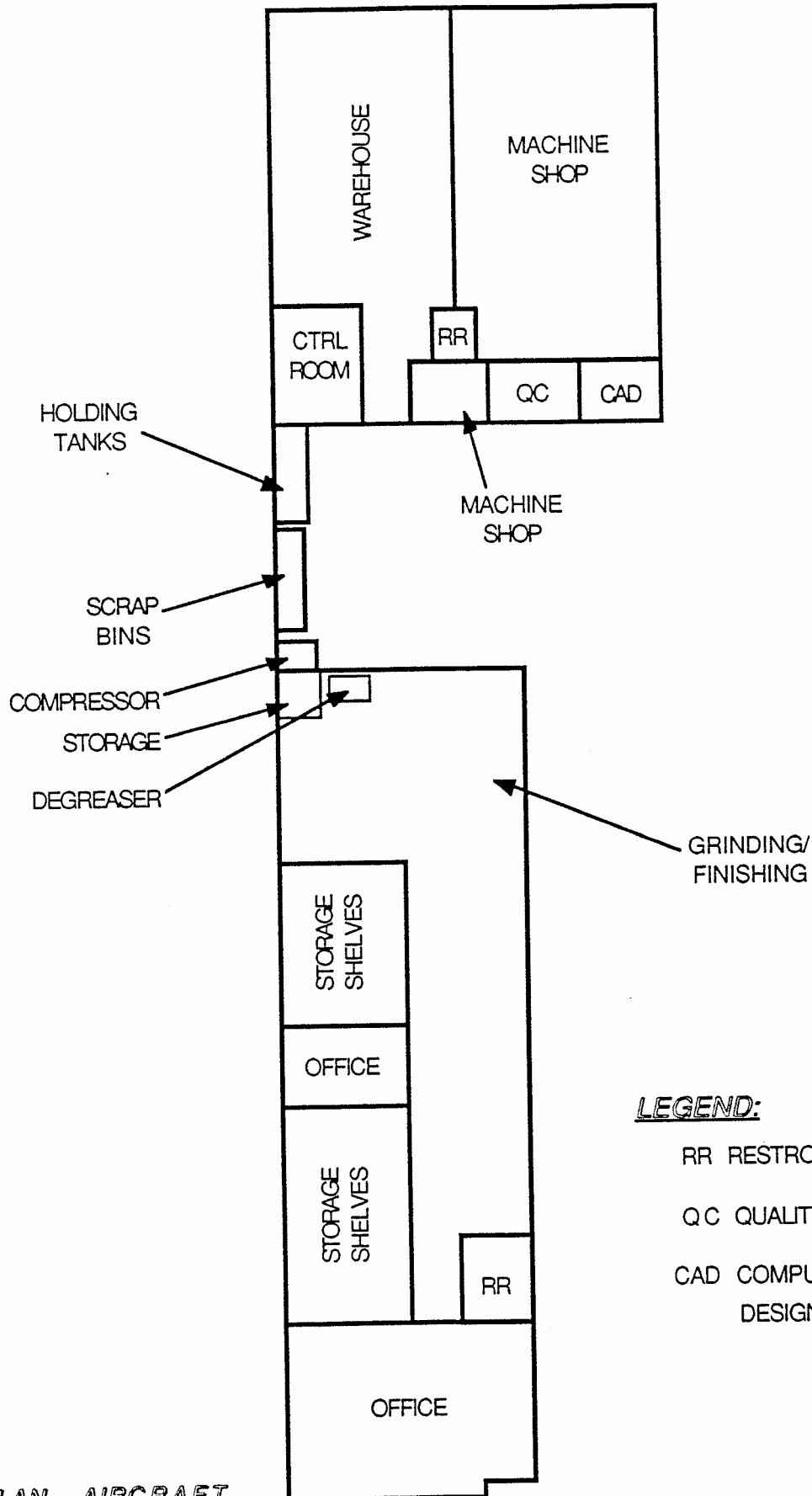
PLATE NO.: 1



ALLEY



SCALE: 1"=40'



**LEGEND:**

RR RESTROOMS

QC QUALITY CONTROL

CAD COMPUTER AIDED  
DESIGN AREA

**ALLAN AIRCRAFT**

11643 VANOWEN STREET  
NORTH HOLLYWOOD, CALIFORNIA

S.E.CO NO. 24070

**PLOT PLAN**

**SMITH-EMERY COMPANY**  
TECHNICAL ILLUSTRATION BY A.C.H.

PLATE NO.: 2

COLUMN WRITE IN	DATE	PURCHASED FROM	PRODUCT	QUANTITY	1)	CAS	No
1	3-26-91	Castrol	Ro220 High Spin Oil	5 gal	64742-65-0	64742-57-0	
2	3-25-91	CASTROL	AW68 Hydraulic Oil	55 gal	64742-54-7		
3	3-25-91	CASTROL	AW32	55 gal	64742-54-7		
4	1-16-91	CASTROL	KLEEN 3625	15 gal	1310-58-3	141-43-5	
5	2-8-91	CASTROL	SAFETY COOL 822C	10 gal	NONE NOT HAZARDOUS		
6	2-8-91	CASTROL	KLEEN 3625	5 gal	1310-58-3	141-43-5	
7	1-4-91	CASTROL	AW68 HYD OIL	55 gal	64742-54-7		
8	1-4-91	CASTROL	SAFETY COOL 822C	5 gal	NONE NOT HAZARDOUS		
9	1-14-91	CASTROL	SAFETY COOL 822C	55 gal	NONE NOT HAZARDOUS		
10	6-5-91	CASTROL	SAFETY COOL 822C	55 gal	NONE NOT HAZARDOUS		
11	9-3-91	CASTROL	COOLANT 9822C	55 gal	NONE NOT HAZARDOUS		
12	9-25-91	CASTROL	AW68 HYD OIL	55 gal	64742-54-7		
13	11-28-91	CASTROL	COOLANT 9822C	55 gal	NONE NOT HAZARDOUS		
14	11-25-91	CASTROL	AW32 HYD OIL	55 gal	64742-54-7		
15	7-25-90	CASTROL	W329 COOLANT	55 gal	64741-96-4		
16	8-23-90	CASTROL	AW68 HYD OIL	55 gal	64742-54-7		
17	7-24-90	CASTROL	628 P HYD OIL	5 gal	64741-88-4		
18	7-24-90	CASTROL	Ro220 HYD OIL	10 gal	64742-65-0	64742-57-0	
19	6-19-90	CASTROL	W329 HYD OIL	55 gal	64741-96-4		
20	4-4-90	CASTROL	AW68 HYD OIL	55 gal	64742-54-7		
21	1-15-90	TORANGA OIL	DTE-26 LUBE OIL	55 gal	NONE NOT HAZARDOUS		
22	12-21-89	CHEMSEARCH	NATUROL 12 SOLVENT	20 gal	NONE LISTED		
23	11-2-89	CASTROL	AW68 HYD OIL	55 gal	64742-54-7		
24	10-11-89	SPECTRUM	NITRIC ACID	10 liters	7697-37-2		
25	8-14-89	SHASTA PETROLEUM	500 HANGSTEFERS COOLANT	55 gal	NONE - NOT HAZARDOUS		
26	8-10-89	3E CHEMICAL	3500 COOLANT	55 gal	64741-96-4 Not Hazardous		
27	8-10-89	3E CHEMICAL	4225 HYD OIL	55 gal	NONE - NOT HAZARDOUS		
28	5-20-89	CASTROL	W329 HYD OIL	55 gal	64741-96-4		
29	2-16-89	SHASTA PETROLEUM	500 HANGSTEFERS COOLANT	55 gal	NONE NOT HAZARDOUS		
30	1-5-89	3E CHEMICAL	3500 Coolant	220 gal	64741-96-4		
31	9-28-88	TORANGA OIL	HD68 OIL	55 gal	64742-54-7		
32	8-5-88	SHASTA PETRO	500 HANGSTEFERS COOLANT	55 gal	NONE NOT HAZARDOUS		
33	8-3-88	3E CHEMICAL	#35 SOLVENT	55 gal	64742-47-8, 64742-95-6, 68515-253		
34	3-17-88	CHEMSEARCH	#3480 NATURALIZER	20 gal	NOT AVAILABLE		
35	2-23-88	3E CHEMICAL	4225 HYD OIL	110 gal	NONE NOT HAZARDOUS		
36	2-23-88	3E CHEMICAL	3500 COOLANT	110 gal	64741-96-4 NOT HAZARDOUS		
37	11-16-87	HOLCHEM CO	NITRIC ACID	845 oz	7697-37-2		
38	10-15-87	SHASTA PETRO	500 HANGSTEFERS	55 gal	NONE NOT HAZARDOUS		
39	8-7-87	3E CHEMICAL	3500 COOLANT	210 gal	64741-96-4 NOT HAZARDOUS		
40	8-3-87	3E CHEMICAL	4225 HYD OIL	210 gal	NONE NOT HAZARDOUS		
41	4-13-87	Shasta Petro	500 HANGSTEFERS	55 gal	NONE NOT HAZARDOUS		
42	2-19-87	ERNST	#68 HYD OIL	55 gal	64742-54-7		
43	12-4-86	SHASTA PETRO	DURO S-150 HYD OIL	55 gal	64742-65-0	64742-18-3	
44	10-29-86	CLM	4225 HYD OIL	210 gal	NONE NOT HAZARDOUS		
45	9-16-86	SHASTA PETRO	500 HANGSTEFERS	55 gal	NONE NOT HAZARDOUS		
46	5-23-86	CLM	IPA	20 gal	NOT AVAILABLE		
47	4-25-86	SHASTA PETRO	500 HANGSTEFERS	55 gal	NONE NOT HAZARDOUS		
48	3-24-86	CLM	4225 HYD OIL	265 gal	NONE NOT HAZARDOUS		
49	2-11-86	CLM	NITRIC ACID	15 gal	7697-37-2		
50	2-4-86	CLM	4225 Hyd Oil	55 gal	NONE NOT HAZARDOUS		



Please print or type. (Form designed for use on elite pitch typewriter)

**IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550**

DHS 8022 A (1/88)  
EPA 8700—22  
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

Allan Aircraft  
11643 Van Owen North Hollywood CA 91609

4. Generator's Phone (213) 277-0941

A. State Manifest Document Number

88273304

B. State Generator's ID

5. Transporter 1 Company Name

ROZUK OIL & VAC. INC.

6. US EPA ID Number

CA 19 13 10 17 13 15 11 14 16

C. State Transporter's ID

D. Transporter's Phone 813 443-6744

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

Deffenno/Kerdoon  
2000 N. Alameda  
Compton CA 90222

10. US EPA ID Number

CA 17 10 18 10 10 11 13 13 15 12

G. State Facility's ID

H. Facility's Phone 213 537 7100

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers  
No. Type

13. Total Quantity

14. Unit Wt/Vol

I. Waste No.

a. Hazardous Waste Liquid N.O.S. or - NA 9189

0 0 1 1 T T

1 1 1 1 G

State  
222  
EPA/Other

THIS WASTE STREAM HAS BEEN QUALIFIED FOR RECYCLING/TREATMENT AT THE DeMENNO/KERDOON FACILITY IN COMPTON, CALIFORNIA. THIS FACILITY HAS THE NECESSARY PERMITS TO RECEIVE YOUR WASTE STREAM AS QUALIFIED. OUR EPA NUMBER IS CAT080013352

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

a. 01

b.

c.

d.

15. Special Handling Instructions and Additional Information

Appropriate protective clothing  
ERG#31  
Emerg. # 213 877 0941

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

Signature

Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

Month Day Year

88273304  
IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

**IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550**

DHS 8022 A (1/88)  
EPA 8700—22  
(Rev. 9-88) Previous editions are obsolete.

**Do Not Write Below This Line**

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

04104159



# Certificate of Treatment/Recycling

ISSUED TO

FOR

MANIFEST NUMBER

89955067

DATE RECEIVED

11-27-90

The aqueous waste received on the above manifest will be treated to standards mandated by the FEDERAL CLEAN WATER ACT and to effluent requirements established by the Sanitation Districts of Los Angeles County. Waste treatment and recycling is performed under permits granted to DeMENNO/KERDOON, a California corporation, by the California Department of Health Services, in coordination with the Environmental Protection Agency, in accordance with the provisions of the Resource Conservation and Recovery Act (RCRA) of 1976, together with applicable federal and state regulations including but not limited to waste discharge requirements established by the Sanitation Districts of Los Angeles County.

When the above described waste material is accepted by DeMENNO/KERDOON and treated/recycled and the aqueous phase discharged for further treatment by the Sanitation Districts, the certificate holder's responsibility for the waste material is eliminated under both RCRA and Proposition 65. Upon request, DeMENNO/KERDOON will issue this certificate that all waste material has been handled in accordance with applicable permits and the certificate holder's liability has been terminated.

DeMENNO/KERDOON

"Compliance Through Recycling"

By:

Casey K. Yu

Date

12-3-90

Casey K. Yu, B.S., M.S.  
Environmental Compliance Mgr.  
Chief Chemist

2000 NORTH ALAMEDA STREET ☐ COMPTON ☐ CALIFORNIA ☐ 90222  
(213) 537-7100 ☐ FACSIMILE (213) 639-2946

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

Allan Aircraft

11643 Van Owen North Hollywood, CA 91609

4. Generator's Phone (213) 877 0941

5. Transporter 1 Company Name

Rozuk Oil & Vacuum Inc.

6. US EPA ID Number

1C1A1D1918101713151146

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

DeMenno/Kerdoon

2000 N. Alameda St.

Compton CA 90222

10. US EPA ID Number

1C1A1T10181010113131512

A. State Manifest Document Number

88270054

B. State Generator's ID

CA4000027854

C. State Transporter's ID

010546

D. Transporter's Phone

818 443 6744

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CA1T10181010113131512

H. Facility's Phone

213 537 7100

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No. Type

13. Total Quantity

14. Unit Wt/Vol

I. Waste No.

a.

Hazardous Waste Liquid N.O.S. or-m-a NA 9189

01011 TITOP8000

State

222

EPA/Other

b.

State

EPA/Other

c.

State

EPA/Other

d.

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

OILS 15%  
WATER 80%  
MUD 5%

K. Handling Codes for Wastes Listed Above

a.

01

b.

c.

d.

15. Special Handling Instructions and Additional Information

APPROPRIATE PROTECTIVE CLOTHING G # 27

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

Signature

Month Day Year

06/29/97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Lloyd S Reed

Signature

Lloyd S Reed

Month Day Year

06/29/97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

ARTURO P. PEREZ

Signature

Arturo P. Perez

Month Day Year

06/29/97

01W 10373



Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

CAX000053975

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address		ALLAN AIRCRAFT SUPPLY CO. 11643 VANOWEN ST. NO HOLLYWOOD, CA. 91609		A. State Manifest Document Number 84233332		
4. Generator's Phone (213) 377-0941		5. Transporter 1 Company Name ASBURY OIL		B. State Generator's ID CAX000053975		
6. US EPA ID Number		7. Transporter 2 Company Name		C. State Transporter's ID		
8. US EPA ID Number		9. Designated Facility Name and Site Address		D. Transporter's Phone		
10. US EPA ID Number		DE MENNO/KERDOON 2000 N. ALAMEDA COMPTON, CA.		E. State Transporter (213) 321-1392		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers		F. Transporter's Phone 62702		
a. HAZARDOUS WAISTE NOS/ORME NA9189		No. Type Total Quantity Unit Wt/Vol I. Waste No.		G. State Facility's ID		
b.		001 TT 1000 GAL 221		H. Facility's Phone		
c.						
d.						
J. Additional Descriptions for Materials Listed Above		K. Handling Codes for Wastes Listed Above				
95% WATER, 5% OIL		01				
15. Special Handling Instructions and Additional Information						
GLOVES AND GOGGLES						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.						
RAY TERRONES Printed/Typed Name		Signature		Date		
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed/Typed Name		Signature		Date
18. Transporter 2 Acknowledgement or Receipt of Materials		Printed/Typed Name		Signature		Date
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name		Signature		Date		

APR 29 1985

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address		6. US EPA ID Number		A. State Manifest Document Number		
ALLAN AIRCRAFT SUPPLY CO. 11643 VANOWEN ST. N. HOLLYWOOD, CA. 91609		AD028277036		84579164		
4. Generator's Phone (213) 8770941		8. US EPA ID Number		B. State Generator's ID		
5. Transporter 1 Company Name		10. US EPA ID Number		C. State Transporter's ID		
ASBURY OIL		CAT080013352		D. Transporter's Phone 52644		
7. Transporter 2 Company Name				E. State Transporter's ID (213) 321-1392		
9. Designated Facility Name and Site Address				F. Transporter's Phone		
DE MENNO/KERDOON 2000 N. ALAMEDA COMPTON + CA.				G. State Facility's ID		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)				H. Facility's Phone		
a. HAZARDOUS WAISTE NOS/ORME NA9189				(213) 537-7100		
b.						
c.						
d.						
J. Additional Descriptions for Materials Listed Above		K. Handling Codes for Wastes Listed Above				
95% WATER, 5% OIL.		01				
15. Special Handling Instructions and Additional Information						
GLOVES AND GOGGLES						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.						
Printed/Typed Name		Signature		Date		
RAY TERRONES				Month Day Year		
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature		Date		
Printed/Typed Name		Signature		Date		
John Strasser				Month Day Year		
18. Transporter 2 Acknowledgement or Receipt of Materials		Signature		Date		
Printed/Typed Name		Signature		Date		
				Month Day Year		
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name		Signature		Date		
PAUL KULMYS				Month Day Year		
				4/11/85		

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. <b>EXEMPT</b>	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address <b>11643 VANOWEN ST. N. HOLLYWOOD, CA. 91609 ALLAN AIRCRAFT</b>			A. State Manifest Document Number <b>84579163</b>			
4. Generator's Phone ( <b>213</b> ) <b>877-0941</b>			B. State Generator's ID			
5. Transporter 1 Company Name <b>ASBURY OIL</b>		6. US EPA ID Number <b>CA028277036</b>		C. State Transporter's ID <b>52663</b>		
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone <b>(213) 321-1392</b>		
9. Designated Facility Name and Site Address <b>DE MENNO/KERDOON 2000 N. ALAMEDA COMPTON, CA.</b>		10. US EPA ID Number <b>CAT080013352</b>		E. State Transporter's ID		
				F. Transporter's Phone		
				G. State Facility's ID <b>CA080013352</b>		
				H. Facility's Phone <b>(213) 537-7100</b>		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)			12. Containers	13. Total Quantity	14. Unit	I. Waste No.
a. <b>HAZARDOUS WAISTE NOS/ORME NA9189</b>			No. <b>001</b>	Type <b>TT</b>	<b>1000</b>	<b>CAL 221</b>
b.						
c.						
d.						
J. Additional Descriptions for Materials Listed Above <b>95% WATER 5% OIL</b>				K. Handling Codes for Wastes Listed Above <b>01 01</b>		
15. Special Handling Instructions and Additional Information <b>GLOVES AND GOGGLES</b>						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations. <b>DAN TERRONES</b>						
Printed/Typed Name			Signature		Date Month Day Year <b>3 7 92</b>	
17. Transporter 1 Acknowledgement of Receipt of Materials					Date	
Printed/Typed Name			Signature		Month Day Year <b>03 07 92</b>	
18. Transporter 2 Acknowledgement or Receipt of Materials					Date	
Printed/Typed Name			Signature		Month Day Year	
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name <b>GUADALUPE PARADA</b>			Signature <i>Guadalupe Parada</i>		Date Month Day Year <b>03 17 95</b>	

HAZARDOUS WASTE MANAGEMENT BRANCH  
744 P Street  
Sacramento, CA 95814

## UNIFORM HAZARDOUS WASTE MANIFEST

Please print or type with ELITE type (12 characters per inch).

STATE ID NUMBER **8 3039375**

GENERATOR NAME AND MAILING ADDRESS		MANIFEST DOCUMENT NUMBER					
<b>ALLAN AIRCRAFT</b> <b>11643 VANOWEN</b> <b>NO. HOLLYWOOD, CA. 91609</b>		EPA ID NUMBER					
AREA CODE/PHONE NUMBER		EXEMPT					
TRANSPORTER NO. 1		VEH./CONTAINER NO.	EPA ID NUMBER				
<b>ASBURY OIL CO.</b> <b>2100 N. ALAMETA</b> <b>COMPTON, CA. 90232</b>		<b>52659</b>	<b>CIA D0 282 770316</b>				
TRANSPORTER NO. 2/ALTERNATE TSD FACILITY		VEH./CONTAINER NO.	EPA ID NUMBER				
TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY		EPA ID NUMBER					
<b>DEMENNO KERDOON</b> <b>2000 N. ALAMETA</b> <b>COMPTON, CA. 90232</b>		<b>CIA T08 00 1133512</b>					
AREA CODE/PHONE NUMBER							
PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	WASTE CAT NO.	DISP. METH	
<b>HAZARDOUS WASTE LIQUID NOS</b>	<b>UN 911 89</b>	<b>1,000</b>	<b>G</b>	<b>001 CIT</b>	<b>22</b>	<b>0</b>	
COMPONENTS				CONC. RANGE		UNITS	
				UPPER	LOWER	% PPM	
<b>WATER</b>				<b>99</b>		<b>X</b>	
<b>OIL</b>				<b>1</b>		<b>X</b>	
SPECIAL HANDLING INSTRUCTIONS							
<b>GLOVES</b>							
This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.							
Printed or typed full name and signature				MO.	DAY	YR.	
<i>Paul Rodriguez</i>				<b>1</b>	<b>17</b>	<b>85</b>	
<input type="checkbox"/> Check if continuation sheet is used. Number of continuation sheets							
TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES				DATE REC'D & ACCEPTED	MO.	DAY	YR.
Printed or typed full name and signature				<b>✓</b>	<b>07</b>	<b>85</b>	
TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES				DATE REC'D & ACCEPTED	MO.	DAY	YR.
Printed or typed full name and signature							
DISCREPANCY INDICATION SPACE							
Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSD must complete waste number. See instructions.							
Printed or typed full name and signature				EPA ID NUMBER	MO.	DAY	YR.
<b>Jerome B. Hyde</b>				<b>CIA T08 00 1133512</b>	<b>01</b>	<b>07</b>	<b>85</b>
<b>71467 H20</b>				<b>TSD SENDS THIS COPY TO GENERATOR WITHIN 15 DAYS</b>			

TO BE FILLED IN BY GENERATOR

TO BE FILLED IN BY TRANSPORTER

TO BE FILLED IN BY TSD

# RECEIVED CALIFORNIA HAZARDOUS WASTE MANIFEST

State Department of Health Services  
HAZARDOUS MATERIALS MANAGEMENT SECTION  
744 P Street, Sacramento, CA 95814

Manifest Number **015-008979**

See reverse side for Instructions.  
Please type or print clearly. Press Hard. **JUN 26 1984**

## GENERATOR

(Generator Must Complete)

2 Name ALCANTARA

EPA NO. 11192111111111111111

Address 11192111111111111111

City, State, Zip NO 11192111111111111111

Order Placed By ORDER

P.O./ CONTRACT NO. DATE

## 3 DESIGNATED TSD FACILITY

(AUTHORIZED TO OPERATE UNDER AN APPROVED STATE OR FEDERAL PROGRAM)

Name DEMPSEY KERDOX

EPA NO. CA 1080013352

Address 2000 N Alameda St

City, State, Zip San Jose, CA

Phone No.

## 4 ALTERNATE TSD FACILITY

Name

EPA NO.

Address

City, State, Zip

Phone No.

5 U.S. DOT PROPER SHIPPING NAME	U.S. DOT HAZARD CLASS	U.N./NA ID NO.	WEIGHT OR VOLUME	UNITS	CONTAINERS: NUMBER	TYPE: <input checked="" type="checkbox"/> DRUMS <input type="checkbox"/> BAGS <input type="checkbox"/> CARTONS <input checked="" type="checkbox"/> TANK TRUCK <input type="checkbox"/> DUMP TRUCK <input type="checkbox"/> OTHER
WASTE	141A	141A	1010	gals	1	
WASTE						

WASTE CATEGORY 48 EX. HAZ. WASTE PERMIT NO. N/A GENERATING PROCESS MAINTENANCE SHOP

LIST COMPONENTS: WATER CONC. RANGE UPPER 18 LOWER  UNITS

A. WATER ☒ % ppm. E.  ☐ % ppm.

B. WATER ☒ % ppm. F.  ☐ % ppm.

C.  ☐ % ppm. G.  ☐ % ppm.

D.  ☐ % ppm. Non Hazardous Material 100 %

10 WASTE PROPERTIES: pH 7 ☐ Toxic ☐ Flammable ☐ Corrosive/Irritant ☐ Reactive ☐ Sensitizer ☐ Carcinogen/Mutagen

11 PHYSICAL STATE: ☐ Solid ☒ Liquid ☐ Sludge ☐ Slurry ☐ Gas ☐ Other

12 SPECIAL HANDLING INSTRUCTIONS: ☒ Gloves ☐ Goggles ☐ Respirator ☐ Other

GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.

IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802

13 11/12/84 Signature of Authorized Agent and Title  Date Shipped 11/12/84

## TRANSPORTER (HAULER MUST COMPLETE)

14 NAME ASBURY OIL CO. JOB NO. 1985

EPA NO. CAD028277036 UNIT NO. 5-5A

ADDRESS 13419 Halldale Avenue PHONE NO. (213) 321-1392

CITY, STATE, ZIP Gardena, California 90249 16 Johanna Stearns (Driver) Signature of Authorized Agent and Title  Date 11/12/84

## TSD FACILITY (FACILITY-OPERATOR MUST COMPLETE)

17 NAME  18 QUANTITY (If Measured)  21 HANDLING OR DISPOSAL METHOD: ☐ Surface Impoundment ☐ Landfill

EPA NO.  19 STATE FEE (If Any) \$  ☐ Injection Well ☐ Land Treatment

PHONE NO.  ☐ Treatment (Specify)  ☐ Recovery or Reuse ☐ Storage/Transfer

20 INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT:

IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY:

22 NAME  23 11/12/84 Signature of Authorized Agent and Title  Date Accepted 11/12/84

EPA NO.  GENERATOR'S COPY FROM TSD

See reverse side for Instructions.  
Please Type or Print clearly. Press Hard.

RECEIVED CALIFORNIA HAZARDOUS WASTE MANIFEST  
SEP 26 1984  
State Department of Health Services  
HAZARDOUS MATERIALS MANAGEMENT SECTION  
744 P Street, Sacramento, CA 95814

Manifest Number 015-005800

GENERATOR, Generator Must Submit Aircraft

Designated TSD Facility (Authorized to operate under an approved state program or federal program)

Alternate TSD Facility

2 Name Allen Aircraft

EPA NO. E14319PT

Address 11643 Vanowen Phone No.

City, State, Zip No. Hollywood CA

Name De Monno Karoon

EPA NO. C47080015352

Address 2000 N Alameda St

City, State, Zip Compton, CA

Name

EPA NO.

Address

City, State, Zip

5 U.S. DOT PROPER SHIPPING NAME

U.S. DOT HAZARD CLASS

UN/NA ID NO.

WEIGHT OR VOLUME

UNITS

CONTAINERS NUMBER: 1

TYPE: ☒ DRUMS ☐ BAGS ☐ CARTONS ☒ TANK TRUCK ☐ DUMP TRUCK ☐ OTHER

WASTE WASTE + OIL N/A

1010 gals

6 WASTE CATEGORY 48

7 EX. HAZ. WASTE PERMIT NO. N/A

8 GENERATING PROCESS Machine Shop

9 COMPONENTS:

CONC. RANGE UPPER LOWER

UNITS

E. ppm.

F. ppm.

G. ppm.

Non Hazardous Material 100 %

CONC. RANGE UPPER LOWER

UNITS

ppm.

A. WASTE OIL 2

B. ppm.

C. ppm.

D. ppm.

Non Hazardous Material 100 %

CONC. RANGE UPPER LOWER

UNITS

ppm.

ppm.

ppm.

10 WASTE PROPERTIES: pH 7

11 PHYSICAL STATE: ☐ Solid ☒ Liquid ☐ Sludge ☐ Slurry ☐ Gas ☐ Other

12 SPECIAL HANDLING INSTRUCTIONS: ☐ Gloves ☐ Goggles ☐ Respirator ☐ Other

13 Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.

IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802

13 Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

TRANSPORTER

(HAULER MUST COMPLETE)

14 NAME ASBURY OIL CO.

EF CAD0028277036

ADDRESS 13419 Halldale Avenue PHONE NO. (213) 321-1392

CITY, STATE, ZIP Gardena, California 90249

15 PICK-UP DATE 9/17/84

TIME 12:00 PM

9/17/84

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

TSD FACILITY

(FACILITY-OPERATOR MUST COMPLETE)

17 NAME

EPA NO. 01702061352

PHONE NO. 537 7100

18 QUANTITY (If Measured)

19 STATE FEE (If Any)

20 INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT:

21 HANDLING OR DISPOSAL METHOD:

☐ Surface Impoundment ☐ Landfill

☐ Injection Well ☐ Land Treatment

☐ Treatment (Specify)

☒ Recovery or Reuse ☐ Storage/Transfer

22 NAME

23 Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

F WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY:

A NO.

68476 (H2O) 1/2

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

Signature of Authorized Agent and Title

See reverse side for instructions.  
Please type or print clearly. Press Hard.

# CALIFORNIA HAZARDOUS WASTE MANIFEST

State Department of Health Services  
HAZARDOUS MATERIALS MANAGEMENT SECTION  
744 P Street, Sacramento, CA 95814

Manifest Number **015-005857**

**GENERATOR** (Generator Must Complete) **1** Designated TSD Facility (Authorized to operate under an approved state program or federal program) **4** Alternate TSD Facility

**2** Name Allen Aircraft Name Demetrius K. Brown EPA NO. CAT080018352 Address 2000 N. Alameda St City, State, Zip Compton CA

Address 11648 Vanowen St City, State, Zip 91609 City, State, Zip Compton CA

U.S. DOT PROPER SHIPPING NAME	HAZARD CLASS	UN/NA ID NO.	WEIGHT OR VOLUME	UNITS	CONTAINERS NUMBER:	TYPE:
WASTE	n/a	n/a	1010	gals	1	<input type="checkbox"/> DRUMS <input type="checkbox"/> BAGS <input type="checkbox"/> CARTONS
WASTE	n/a	n/a				<input checked="" type="checkbox"/> TANK TRUCK <input type="checkbox"/> DUMP TRUCK
WASTE						<input type="checkbox"/> OTHER

**6** WASTE CATEGORY 48 **7** EX. HAZ. WASTE PERMIT NO. n/a **8** GENERATING PROCESS Machine Shop

**9** LIST COMPONENTS: **CONC. RANGE UPPER LOWER UNITS**  
A. WASTE 45 ☐ ppm. E.  ☐ ppm.  
B. OIL 5 ☐ ppm. F.  ☐ ppm.  
C.  ☐ ppm. G.  ☐ ppm.  
D.  ☐ ppm. Non Hazardous Material 100 %

**10** WASTE PROPERTIES: pH 7 ☐ Toxic ☐ Flammable ☐ Corrosive/Irritant ☐ Reactive ☐ Sensitizer ☐ Carcinogen/Mutagen  
**11** PHYSICAL STATE: ☐ Solid ☒ Liquid ☐ Sludge ☐ Slurry ☐ Gas ☐ Other   
**12** SPECIAL HANDLING INSTRUCTIONS: ☐ Gloves ☐ Goggles ☐ Respirator ☐ Other

GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.

IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD, 1-800-424-8802  
**13** Signature of Authorized Agent and Title John Shavar (owner) Date 7/30/84

**TRANSPORTER** (HAULER MUST COMPLETE)  
**14** NAME ASBURY OIL CO. **15** PICK-UP DATE 7/30/84  
NO. CAD028277036 TIME 2:30 ☐ AM ☒ PM

ADDRESS 13419 Halldale Avenue PHONE NO. (213) 321-1392  
CITY, STATE, ZIP Gardena, California 90249 **16** Signature of Authorized Agent and Title John Shavar (owner) Date 7/30/84

**TSD FACILITY** (FACILITY OPERATOR MUST COMPLETE)  
**17** NAME BEACON PAPER BOX **18** QUANTITY (if Measured)  **21** HANDLING OR DISPOSAL METHOD:  
EPA NO. CA 1080018352 **19** STATE FEE (if Any)  ☐ Surface Impoundment ☐ Landfill  
PHONE NO.  ☐ Injection Well ☐ Land Treatment  
**20** INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT: ☒ Recovery or Reuse ☐ Storage/Transfer

IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY:  
**22** NAME  **23** Signature of Authorized Agent and Title John Shavar - OPERATOR Date 7/31/84  
EPA NO.  Signature of Authorized Agent and Title  Date Accepted

67330 (440) 1/2

TO GENERATOR

# RECEIVED CALIFORNIA HAZARDOUS WASTE MANIFEST

See reverse side for Instructions.  
Please type or print clearly. Pres. H&M 18 1984

State Department of Health Services  
HAZARDOUS MATERIALS MANAGEMENT SECTION  
744 P Street, Sacramento, CA 95814

① Manifest Number **015-005731**

**GENERATOR** (Generator Must Complete)

③ Designated TSD Facility (Authorized to operate under an approved state program or federal program)

④ Alternate TSD Facility

② Name Allen Associates Name DeMarco Kaldon  
EPA NO. E14111111111111111111 EPA NO. C4110800113352

Address 11643 Vanowen Rd Address 2000 N. Alameda St

City, State, Zip Los Angeles, CA City, State, Zip Compton, CA

Name \_\_\_\_\_ EPA NO. \_\_\_\_\_  
Address \_\_\_\_\_  
City, State, Zip \_\_\_\_\_

⑤ U.S. DOT PROPER SHIPPING NAME	U.S. DOT HAZARD CLASS	UN/NA ID NO.	WEIGHT OR VOLUME	UNITS	CONTAINERS NUMBER:	TYPE: <input type="checkbox"/> DRUMS <input type="checkbox"/> BAGS <input type="checkbox"/> CARTONS <input type="checkbox"/> TANK TRUCK <input type="checkbox"/> DUMP TRUCK <input type="checkbox"/> OTHER
WASTE <u>WASTE OIL</u>	<u>N/A</u>	<u>N/A</u>	<u>4010</u>	<u>gals</u>	<u>1</u>	

⑥ WASTE CATEGORY 48 ⑦ EX. HAZ. WASTE PERMIT NO. N/A ⑧ GENERATING PROCESS MACH 145E

COMPONENTS: CONCENTRATION RANGE UPPER LOWER UNITS

⑨ A. WASTE 95 ☒ % ☐ ppm. E. \_\_\_\_\_ ☐ % ☐ ppm.

B. SOLUBLE OIL 5 ☒ % ☐ ppm. F. \_\_\_\_\_ ☐ % ☐ ppm.

C. \_\_\_\_\_ ☐ % ☐ ppm. G. \_\_\_\_\_ ☐ % ☐ ppm.

D. \_\_\_\_\_ Non Hazardous Material 100 %

⑩ WASTE PROPERTIES: pH 7 ☐ Toxic ☐ Flammable ☐ Corrosive/Irritant ☐ Reactive ☐ Sensitizer ☐ Carcinogen/Mutagen

⑪ PHYSICAL STATE: ☐ Solid ☒ Liquid ☐ Sludge ☐ Slurry ☐ Gas ☐ Other \_\_\_\_\_

⑫ SPECIAL HANDLING INSTRUCTIONS: ☒ Gloves ☐ Goggles ☐ Respirator ☐ Other \_\_\_\_\_

GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.

⑬ John L. L. L. Signature of Authorized Agent and Title 6/7/84 Date Shipped

**TRANSPORTER** (HAULER MUST COMPLETE)

⑭ NAME ASBURY OIL CO.

EPA CAD0028277036

ADDRESS 13419 Halldale Avenue PHONE NO. (213) 321-1392

CITY, STATE, ZIP Gardena, California 90249

⑮ PICK-UP DATE 6/7/84 TIME 4:00 ☐ AM ☒ PM 6/7/84 Date

**TSD FACILITY** (FACILITY-OPERATOR MUST COMPLETE)

⑰ NAME John L. L. L. ⑱ QUANTITY (If Measured) \_\_\_\_\_

EPA NO. 11111111111111111111 ⑲ STATE FEE (If Any) \_\_\_\_\_

PHONE NO. \_\_\_\_\_

⑳ INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT:

IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY:

⑳ NAME \_\_\_\_\_

EPA NO. \_\_\_\_\_

⑲ John L. L. L. Signature of Authorized Agent and Title 6/7/84 Date Accepted

TO GENERATOR



Please print or type with ELITE type (12 characters per inch).

RECEIVED

JUN 18 1991

STATE ID NUMBER

83390808

GENERATOR NAME AND MAILING ADDRESS

Allan Aircraft  
11643 Van Owen  
N. Hollywood, Ca 91609  
AREA CODE/PHONE NUMBER (213) 777-4941

MANIFEST DOCUMENT NUMBER

EPA ID NUMBER

TRANSPORTER NO. 1

Oil & Solvent Process Company  
1704 West First Street  
Azusa, California 91702

VEH./CONTAINER NO.

EPA ID NUMBER

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

VEH./CONTAINER NO.

EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY

Oil & Solvent Process Company  
1704 West First Street  
Azusa, California 91702  
AREA CODE/PHONE NUMBER (618) 344-5117

EPA ID NUMBER

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS

UN/NA  
NUMBER

TOTAL  
QUANTITY

UNIT  
WT/VOL

CONTAINER  
NO. TYPE

WASTE DIS  
CAT. NO. MET

Waste 1,1,1, Trichloroethane Org-A UN 2831 1 RPD G 004 DM 2 11 2

COMPONENTS

CONC. RANGE  
UPPER LOWER

UNITS  
% PPM

1,1,1, Trichloroethane

85

80

X

Methylene Chloride

3

0

X

Perchloroethylene

3

0

X

Inhibitors

3

1

X

Non Hazardous Material

25

15

X

SPECIAL HANDLING INSTRUCTIONS

Gloves & Goggles

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

MO.

DAY

YR.

Printed or typed full name and signature

RAYMOND TERRELL

05

31

84

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

DATE  
REC'D  
&  
ACCEPTED

MO.

DAY

YR.

Printed or typed full name and signature

DAVID H. SANCHEZ

05

31

84

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

DATE  
REC'D  
&  
ACCEPTED

MO.

DAY

YR.

Printed or typed full name and signature

DISCREPANCY INDICATION SPACE

N/A

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions.

DATE RECEIVED & ACCEPTED

Printed or typed full name and signature

EPA ID NUMBER

MO.

DAY

YR.

See reverse side for instructions.  
Please type or print clearly. Press Hard.

APR - 2 1984  
CE 114 E 11

**CALIFORNIA HAZARDOUS WASTE MANIFEST**  
State Department of Health Services  
HAZARDOUS MATERIALS MANAGEMENT SECTION  
744 P Street, Sacramento, CA 95814

1 Manifest Number **015** - **005355**

**GENERATOR**

(Generator Must Complete)

2 Name ALLIED AIRCRAFT CO.

EPA NO. EXEMPT

Address 11443 Van Ness Avenue No. 871294

City, State, Zip LA BELLUNA, CA

Name DeMunn/Keebon

EPA NO. CA 7060013352

Address 2200 W. Alameda

City, State, Zip Compton, CA

Name \_\_\_\_\_

EPA NO. \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

3 Designated TSD Facility (Authorized to operate under an approved state program or federal program)

4 Alternate TSD Facility

5 U.S. DOT PROPER SHIPPING NAME	U.S. DOT HAZARD CLASS	UN/NA ID NO.	WEIGHT OR VOLUME	UNITS	CONTAINERS NUMBER:
WASTE <u>CLC/WASTE</u>			<u>900</u>	<u>GALES</u>	TYPE: <input type="checkbox"/> DRUMS <input type="checkbox"/> BAGS <input type="checkbox"/> CARTONS
WASTE					<input type="checkbox"/> TANK TRUCK <input type="checkbox"/> DUMP TRUCK
WASTE					<input type="checkbox"/> OTHER

6 SITE CATEGORY 48

7 EX. HAZ WASTE PERMIT NO. \_\_\_\_\_

8 GENERATING PROCESS \_\_\_\_\_

9 LIST COMPONENTS:

	CONC. UPPER	RANGE LOWER	UNITS
A. <u>WASTE</u>		<u>90%</u>	% ppm.
B. <u>CLC</u>		<u>10%</u>	% ppm.
C. _____			% ppm.
D. _____			% ppm.
10 WASTE PROPERTIES: pH <u>5</u>	<input type="checkbox"/> Toxic	<input type="checkbox"/> Flammable	<input type="checkbox"/> Corrosive/Irritant
11 PHYSICAL STATE: <input type="checkbox"/> Solid <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Sludge <input type="checkbox"/> Slurry <input type="checkbox"/> Gas	<input type="checkbox"/> Goggles	<input type="checkbox"/> Respirator	<input type="checkbox"/> Other _____
12 SPECIAL HANDLING INSTRUCTIONS: <input checked="" type="checkbox"/> Gloves			

Non Hazardous Material 100%

☐ Reactive ☐ Sensitizer ☐ Carcinogen/Mutagen

GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.

IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802

13 R. B. D. Sullivan  
Signature of Authorized Agent and Title

2-13-84  
Date Shipped

**TRANSPORTER**

(HAULER MUST COMPLETE)

14 WE ASBURY OIL CO.

EPA NO. CAD028277036

ADDRESS 13419 Halldale Avenue PHONE NO. (213) 321-1392

CITY, STATE, ZIP Gardena, California 90249

15 PICK-UP DATE 2-13-84

16 David H. Harris  
Signature of Authorized Agent and Title

2-13-84  
Date

**TSD FACILITY**

(FACILITY-OPERATOR MUST COMPLETE)

17 NAME DeMunn/Keebon

EPA NO. CA 7060013352

PHONE NO. 537-7100

18 QUANTITY (If Measured) 200 Gals.

19 STATE FEE (If Any) \_\_\_\_\_

21 HANDLING OR DISPOSAL METHOD:

- ☐ Surface Impoundment ☐ Landfill
- ☐ Injection Well ☐ Land Treatment
- ☒ Treatment (Specify) \_\_\_\_\_
- ☒ Recovery or Reuse ☐ Storage/Transfer

20 INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT: \_\_\_\_\_

IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY: \_\_\_\_\_

22 NAME \_\_\_\_\_

23 DeMunn/Keebon  
Signature of Authorized Agent and Title

2/13/84  
Date Accepted

ORIGINAL

① Manifest Number	015-	007067
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GENERATOR (Generator Must Complete)				DESIGNATED TSD FACILITY (AUTHORIZED TO OPERATE UNDER AN APPROVED STATE OR FEDERAL PROGRAM)				ALTERNATE TSD FACILITY			
<b>1</b> Name <u>Ellen's Waste Supply</u> EPA NO. <u>1136117</u> Address <u>1136117</u> City, State, Zip <u>1136117</u> Order Placed By <u>1136117</u> P.O. / ORDER DATE <u>1136117</u> CONTRACT NO. <u>1136117</u>				<b>2</b> Name <u>Ellen's Waste Supply</u> EPA NO. <u>1136117</u> Address <u>1136117</u> City, State, Zip <u>1136117</u> Order Placed By <u>1136117</u> P.O. / ORDER DATE <u>1136117</u> CONTRACT NO. <u>1136117</u>				<b>3</b> Name <u>Ellen's Waste Supply</u> EPA NO. <u>1136117</u> Address <u>1136117</u> City, State, Zip <u>1136117</u> Order Placed By <u>1136117</u> P.O. / ORDER DATE <u>1136117</u> CONTRACT NO. <u>1136117</u>			
<b>4</b> U.S. DOT PROPER SHIPPING NAME WASTE <u>HAZARDOUS WASTE</u> WASTE <u>HAZARDOUS WASTE</u> WASTE <u>HAZARDOUS WASTE</u>				<b>5</b> U.S. DOT HAZARD CLASS <u>1136117</u> <b>6</b> U.S. DOT HAZARD CLASS <u>1136117</u> <b>7</b> U.S. DOT HAZARD CLASS <u>1136117</u>				<b>8</b> U.S. DOT HAZARD CLASS <u>1136117</u> <b>9</b> U.S. DOT HAZARD CLASS <u>1136117</u> <b>10</b> U.S. DOT HAZARD CLASS <u>1136117</u>			
<b>11</b> WASTE CATEGORY <u>48</u> <b>12</b> EX. HAZ. WASTE PERMIT NO. <u>1136117</u> <b>13</b> GENERATING PROCESS <u>Machine Shop</u>				<b>14</b> WASTE PROPERTIES: pH <u>9.0</u> <b>15</b> PHYSICAL STATE: <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Sludge <input type="checkbox"/> Gas <b>16</b> SPECIAL HANDLING INSTRUCTIONS: <input type="checkbox"/> Gloves <input type="checkbox"/> Goggles <input type="checkbox"/> Respirator <input type="checkbox"/> Other <u>None</u>				<b>17</b> WASTE PROPERTIES: pH <u>9.0</u> <b>18</b> PHYSICAL STATE: <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Sludge <input type="checkbox"/> Gas <b>19</b> SPECIAL HANDLING INSTRUCTIONS: <input type="checkbox"/> Gloves <input type="checkbox"/> Goggles <input type="checkbox"/> Respirator <input type="checkbox"/> Other <u>None</u>			
<b>20</b> WASTE PROPERTIES: pH <u>9.0</u> <b>21</b> PHYSICAL STATE: <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Sludge <input type="checkbox"/> Gas <b>22</b> SPECIAL HANDLING INSTRUCTIONS: <input type="checkbox"/> Gloves <input type="checkbox"/> Goggles <input type="checkbox"/> Respirator <input type="checkbox"/> Other <u>None</u>				<b>23</b> WASTE PROPERTIES: pH <u>9.0</u> <b>24</b> PHYSICAL STATE: <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Sludge <input type="checkbox"/> Gas <b>25</b> SPECIAL HANDLING INSTRUCTIONS: <input type="checkbox"/> Gloves <input type="checkbox"/> Goggles <input type="checkbox"/> Respirator <input type="checkbox"/> Other <u>None</u>				<b>26</b> WASTE PROPERTIES: pH <u>9.0</u> <b>27</b> PHYSICAL STATE: <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Sludge <input type="checkbox"/> Gas <b>28</b> SPECIAL HANDLING INSTRUCTIONS: <input type="checkbox"/> Gloves <input type="checkbox"/> Goggles <input type="checkbox"/> Respirator <input type="checkbox"/> Other <u>None</u>			
<b>29</b> GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.											
<b>30</b> TRANSPORTER (HAULER MUST COMPLETE) <b>31</b> NAME <u>ASBURY OIL CO.</u> <b>32</b> ADDRESS <u>13419 Halldale Avenue</u> <b>33</b> CITY, STATE, ZIP <u>Gardena, California 90249</u> <b>34</b> PHONE NO. <u>(213) 321-1392</u>				<b>35</b> TSD FACILITY (FACILITY-OPERATOR MUST COMPLETE) <b>36</b> NAME <u>Ellen's Waste Supply</u> <b>37</b> ADDRESS <u>1136117</u> <b>38</b> CITY, STATE, ZIP <u>1136117</u> <b>39</b> PHONE NO. <u>1136117</u>				<b>40</b> TSD FACILITY (FACILITY-OPERATOR MUST COMPLETE) <b>41</b> NAME <u>Ellen's Waste Supply</u> <b>42</b> ADDRESS <u>1136117</u> <b>43</b> CITY, STATE, ZIP <u>1136117</u> <b>44</b> PHONE NO. <u>1136117</u>			
<b>45</b> NAME <u>Ellen's Waste Supply</u> <b>46</b> ADDRESS <u>1136117</u> <b>47</b> CITY, STATE, ZIP <u>1136117</u> <b>48</b> PHONE NO. <u>1136117</u>				<b>49</b> NAME <u>Ellen's Waste Supply</u> <b>50</b> ADDRESS <u>1136117</u> <b>51</b> CITY, STATE, ZIP <u>1136117</u> <b>52</b> PHONE NO. <u>1136117</u>				<b>53</b> NAME <u>Ellen's Waste Supply</u> <b>54</b> ADDRESS <u>1136117</u> <b>55</b> CITY, STATE, ZIP <u>1136117</u> <b>56</b> PHONE NO. <u>1136117</u>			
<b>57</b> NAME <u>Ellen's Waste Supply</u> <b>58</b> ADDRESS <u>1136117</u> <b>59</b> CITY, STATE, ZIP <u>1136117</u> <b>60</b> PHONE NO. <u>1136117</u>				<b>61</b> NAME <u>Ellen's Waste Supply</u> <b>62</b> ADDRESS <u>1136117</u> <b>63</b> CITY, STATE, ZIP <u>1136117</u> <b>64</b> PHONE NO. <u>1136117</u>				<b>65</b> NAME <u>Ellen's Waste Supply</u> <b>66</b> ADDRESS <u>1136117</u> <b>67</b> CITY, STATE, ZIP <u>1136117</u> <b>68</b> PHONE NO. <u>1136117</u>			
<b>69</b> NAME <u>Ellen's Waste Supply</u> <b>70</b> ADDRESS <u>1136117</u> <b>71</b> CITY, STATE, ZIP <u>1136117</u> <b>72</b> PHONE NO. <u>1136117</u>				<b>73</b> NAME <u>Ellen's Waste Supply</u> <b>74</b> ADDRESS <u>1136117</u> <b>75</b> CITY, STATE, ZIP <u>1136117</u> <b>76</b> PHONE NO. <u>1136117</u>				<b>77</b> NAME <u>Ellen's Waste Supply</u> <b>78</b> ADDRESS <u>1136117</u> <b>79</b> CITY, STATE, ZIP <u>1136117</u> <b>80</b> PHONE NO. <u>1136117</u>			
<b>81</b> NAME <u>Ellen's Waste Supply</u> <b>82</b> ADDRESS <u>1136117</u> <b>83</b> CITY, STATE, ZIP <u>1136117</u> <b>84</b> PHONE NO. <u>1136117</u>				<b>85</b> NAME <u>Ellen's Waste Supply</u> <b>86</b> ADDRESS <u>1136117</u> <b>87</b> CITY, STATE, ZIP <u>1136117</u> <b>88</b> PHONE NO. <u>1136117</u>				<b>89</b> NAME <u>Ellen's Waste Supply</u> <b>90</b> ADDRESS <u>1136117</u> <b>91</b> CITY, STATE, ZIP <u>1136117</u> <b>92</b> PHONE NO. <u>1136117</u>			
<b>93</b> NAME <u>Ellen's Waste Supply</u> <b>94</b> ADDRESS <u>1136117</u> <b>95</b> CITY, STATE, ZIP <u>1136117</u> <b>96</b> PHONE NO. <u>1136117</u>				<b>97</b> NAME <u>Ellen's Waste Supply</u> <b>98</b> ADDRESS <u>1136117</u> <b>99</b> CITY, STATE, ZIP <u>1136117</u> <b>100</b> PHONE NO. <u>1136117</u>				<b>101</b> NAME <u>Ellen's Waste Supply</u> <b>102</b> ADDRESS <u>1136117</u> <b>103</b> CITY, STATE, ZIP <u>1136117</u> <b>104</b> PHONE NO. <u>1136117</u>			

# CALIFORNIA HAZARDOUS WASTE MANIFEST

See reverse side for Instructions.  
Please type or print clearly. Press Hard.

State Department of Health Services  
HAZARDOUS MATERIALS MANAGEMENT SECTION  
744 P Street, Sacramento, CA 95814

① Manifest Number **015-004591**

**GENERATOR** (Generator Must Complete)

② Name Allen Aircraft Supply

EPA NO. 1643

Address 1643 Van Nuys Avenue

City, State, Zip Van Nuys, CA 91411

③ Designated TSD Facility (Authorized to operate under an approved state program or federal program)

Name BKK Corp

EPA NO. 2210542150

Address 2210 S. Alhambra Ave

City, State, Zip Alhambra, CA 91801

④ Alternate TSD Facility

Name

EPA NO.

Address

City, State, Zip

⑤ U.S. DOT PROPER SHIPPING NAME

WASTE

WASTE

U.S. DOT HAZARD CLASS

550

UN/NA ID NO.

WEIGHT OR VOLUME

gal

UNITS

CONTAINERS NUMBER:

1

TYPE: ☐ DRUMS ☐ BAGS ☐ CARTONS ☐ TANK TRUCK ☐ DUMP TRUCK ☐ OTHER

⑥ WASTE CATEGORY 43

⑦ EX. HAZ. WASTE PERMIT NO.

⑧ GENERATING PROCESS Mechanic Shop

⑨ A. Water

B. Acetone

C. 5

D. 1

⑩ WASTE PROPERTIES: pH 7

⑪ PHYSICAL STATE: ☒ Solid ☐ Liquid ☐ Sludge ☐ Slurry ☐ Gas ☐ Other

⑫ SPECIAL HANDLING INSTRUCTIONS: ☐ Gloves ☐ Goggles ☐ Respirator ☐ Other

GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.

IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802

**TRANSPORTER** (HAULER MUST COMPLETE)

⑭ NAME ASBURY OIL CO.

EP CA D028277036

ADDRESS 13419 Halldale Avenue PHONE NO. (213) 321-1392

CITY, STATE, ZIP Gardena, California 90249

**TSD FACILITY** (FACILITY OPERATOR MUST COMPLETE)

⑮ PICK-UP DATE 5-11-83

⑯ QUANTITY (If Measured) 4590

⑰ STATE FEE (If Any) 3.95

⑱ INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT:

IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY:

⑲ NAME

EPA NO.

PHONE NO.

⑳ HANDLING OR DISPOSAL METHOD:

☐ Surface Impoundment ☒ Landfill ☐ Injection Well ☐ Land Treatment ☐ Treatment (Specify) ☐ Recovery or Reuse ☐ Storage/Transfer

⑳ NAME

EPA NO.

⑲ Signature of Authorized Agent and Title David J. De

⑳ Date Accepted 5/12/83

TO GENERATOR

**RECEIVED****CALIFORNIA HAZARDOUS WASTE MANIFEST**See reverse side for Instructions.  
Please type or print clearly. Press Hard.State Department of Health Services  
HAZARDOUS MATERIALS MANAGEMENT SECTION  
744 P Street, Sacramento, CA 95814

1 Manifest Number

015-010076

**GENERATOR**

(Generator Must Complete)

**DESIGNATED TSD FACILITY**

(AUTHORIZED TO OPERATE UNDER AN APPROVED STATE OR FEDERAL PROGRAM)

**ALTERNATE TSD FACILITY**Name ANALYTICAL SERVICESName CREATING LABORATORYName BRICKS & CO.EPA NO. 116-120-100000EPA NO. 121-100-000000EPA NO. 121-100-000000Address 116-120-100000Address 121-100-000000Address 121-100-000000City, State, Zip 116-120-100000City, State, Zip 121-100-000000City, State, Zip 121-100-000000Order Placed By 116-120-100000City, State, Zip 121-100-000000City, State, Zip 121-100-000000P.O. Box 116-120-100000Phone No. 121-100-000000Phone No. 121-100-000000Contract No. 116-120-100000Name 121-100-000000Phone No. 121-100-000000U.S. DOT PROPER SHIPPING NAME 116-120-100000U.S. DOT HAZARD CLASS 121-100-000000UN/NA ID NO. 121-100-000000WASTE 116-120-100000WEIGHT OR VOLUME 121-100-000000CONTAINERS: NUMBER 121-100-000000WASTE 116-120-100000TYPE: ☐ DRUMS ☐ BAGS ☐ CARTONS☐ TANK TRUCK ☐ DUMP TRUCKWASTE 116-120-100000OTHER 121-100-000000OTHER 121-100-000000WASTE CATEGORY 116-120-100000EX. HAZ. WASTE PERMIT NO. 121-100-000000GENERATING PROCESS 121-100-000000WASTE CATEGORY 116-120-100000EX. HAZ. WASTE PERMIT NO. 121-100-000000GENERATING PROCESS 121-100-000000WASTE CATEGORY 116-120-100000EX. HAZ. WASTE PERMIT NO. 121-100-000000GENERATING PROCESS 121-100-000000WASTE CATEGORY 116-120-100000EX. HAZ. WASTE PERMIT NO. 121-100-000000GENERATING PROCESS 121-100-000000WASTE CATEGORY 116-120-100000EX. HAZ. WASTE PERMIT NO. 121-100-000000GENERATING PROCESS 121-100-000000WASTE CATEGORY 116-120-100000EX. HAZ. WASTE PERMIT NO. 121-100-000000GENERATING PROCESS 121-100-000000WASTE CATEGORY 116-120-100000EX. HAZ. WASTE PERMIT NO. 121-100-000000GENERATING PROCESS 121-100-000000WASTE CATEGORY 116-120-100000EX. HAZ. WASTE PERMIT NO. 121-100-000000GENERATING PROCESS 121-100-000000WASTE CATEGORY 116-120-100000EX. HAZ. WASTE PERMIT NO. 121-100-000000GENERATING PROCESS 121-100-000000WASTE CATEGORY 116-120-100000EX. HAZ. 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GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.

IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802

Signature of Authorized Agent and Title

Date Shipped

**TRANSPORTER**

(HAULER MUST COMPLETE)

Name ASBURY OIL CO.JOB NO. 116-120-100000PICK-UP DATE 11-11-83E. C. CAD028277036UNIT NO. 116-120-100000TIME 11:00 AM ☐ PM ☐ADDRESS 13419 Halldale AvenuePHONE NO. (213) 321-1392DATE 11-11-83CITY, STATE, ZIP Gardena, California 90249

Signature of Authorized Agent and Title

Date

**TSD FACILITY**

(FACILITY-OPERATOR MUST COMPLETE)

Name 116-120-100000QUANTITY (If Measured) 116-120-100000

HANDLING OR DISPOSAL METHOD:

EPA NO. 116-120-100000STATE FEE (If Any) \$100000☐ Surface Impoundment ☒ LandfillPHONE NO. 116-120-100000☐ Injection Well ☐ Land Treatment☐ Treatment (Specify) 116-120-100000SHIPMENT: 116-120-100000☐ Recovery or Reuse ☐ Storage/Transfer☐ Storage/Transfer

IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY:

Name 116-120-100000Address 116-120-100000City, State, Zip 116-120-100000EPA NO. 116-120-100000Phone No. 116-120-100000

Signature of Authorized Agent and Title

EPA NO. 116-120-100000

Signature of Authorized Agent and Title

Date Accepted

EPA NO. 116-120-100000

Signature of Authorized Agent and Title

Date Accepted

EPA NO. 116-120-100000

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Signature of Authorized Agent and Title

Date Accepted

EPA NO. 116-120-100000

Signature of Authorized Agent and Title

Date Accepted

EPA NO. 116-120-100000

Signature of Authorized Agent and Title

Date Accepted

GENERATOR'S COPY FROM TSDF











See reverse side for Instructions.  
Please type or print clearly. Press Hard.

# CALIFORNIA HAZARDOUS WASTE MANIFEST

State Department of Health Services  
HAZARDOUS MATERIALS MANAGEMENT SECTION  
744 P Street, Sacramento, CA 95814

1 Manifest Number **015-002525**

## GENERATOR (Generator Must Complete)

2 Name Asbury Oil Co.

EPA NO. 13

Address 13419 Halldale Avenue

City, State, Zip Gardena, California 90249

3 Designated TSD Facility (Authorized to operate under an approved state program or federal program)

Name \_\_\_\_\_

EPA NO. \_\_\_\_\_

Address \_\_\_\_\_

4 Alternate TSD Facility

Name \_\_\_\_\_

EPA NO. \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

U.S. DOT PROPER SHIPPING NAME	U.S. DOT HAZARD CLASS	UN/NA ID NO.	WEIGHT OR VOLUME	UNITS	CONTAINERS NUMBER:
WASTE					TYPE: <input type="checkbox"/> DRUMS <input type="checkbox"/> BAGS <input type="checkbox"/> CARTONS
WASTE					<input type="checkbox"/> TANK TRUCK <input type="checkbox"/> DUMP TRUCK
					<input type="checkbox"/> OTHER

5 WASTE CATEGORY \_\_\_\_\_ 7 EX. HAZ. WASTE PERMIT NO. \_\_\_\_\_ 8 GENERATING PROCESS Coal Ash

9 A. Coal Ash B. Sludge C. Sludge D. \_\_\_\_\_

10 WASTE PROPERTIES: pH \_\_\_\_\_ ☐ Toxic ☐ Flammable ☐ Corrosive/Irritant ☐ Reactive ☐ Sensitizer ☐ Carcinogen/Mutagen

11 PHYSICAL STATE: ☐ Solid ☒ Liquid ☐ Sludge ☐ Slurry ☐ Gas ☐ Other \_\_\_\_\_

12 SPECIAL HANDLING INSTRUCTIONS: ☐ Gloves ☐ Goggles ☐ Respirator ☐ Other \_\_\_\_\_

GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.

IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802

## TRANSPORTER (HAULER MUST COMPLETE)

NAME ASBURY OIL CO.

EPA NO. CAD028277036

ADDRESS 13419 Halldale Avenue PHONE NO. (213) 321-1392

CITY, STATE, ZIP Gardena, California 90249

## TSD FACILITY (FACILITY-OPERATOR MUST COMPLETE)

17 NAME Asbury Oil Co. QUANTITY (If Measured) 1000642

EPA NO. \_\_\_\_\_ STATE FEE (If Any) 525

PHONE NO. \_\_\_\_\_

20 INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT: \_\_\_\_\_

IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY: \_\_\_\_\_

22 NAME \_\_\_\_\_

EPA NO. \_\_\_\_\_

23 Signature of Authorized Agent and Title [Signature] Date Accepted 9-15-81

TO GENERATOR

RECEIVED

# CALIFORNIA HAZARDOUS WASTE MANIFEST

State Department of Health Services  
HAZARDOUS MATERIALS MANAGEMENT SECTION  
744 P Street, Sacramento, CA 95814

Manifest Number 015-002405

See reverse side for instructions. JUL 10 1981  
Please type or print clearly. Press Hard

## GENERATOR (Generator Must Complete)

1 Designated TSD Facility (Authorized to operate under an approved state program or federal program)

4 Alternate TSD Facility

Name Donnerstag EPA NO. 1643 Address Donnerstag No.  
City, State, Zip 11400 11400 City, State, Zip 11400 11400

U.S. DOT PROPER SHIPPING NAME	HAZARD CLASS	U.N. ID NO.	WEIGHT OR VOLUME	UNITS	CONTAINERS NUMBER:
WASTE					TYPE: <input type="checkbox"/> DRUMS <input type="checkbox"/> BAGS <input type="checkbox"/> CARTONS
WASTE					<input type="checkbox"/> TANK TRUCK <input type="checkbox"/> DUMP TRUCK
WASTE					<input type="checkbox"/> OTHER

6 WASTE CATEGORY 7 EX. HAZ. WASTE PERMIT NO. 1000 GENERATING PROCESS Chemical

9 ST COMPONENTS: CONCENTRATION RANGE UPPER LOWER UNITS  
A. 100 95 ppm E. ppm  
B. 100 95 ppm F. ppm  
C. ppm G. ppm  
D. ppm Non Hazardous Material 100%

10 WASTE PROPERTIES: pH 7 ☐ Toxic ☐ Flammable ☐ Corrosive/Irritant ☐ Reactive ☐ Sensitizer ☐ Carcinogen/Mutagen  
11 PHYSICAL STATE: ☒ Solid ☐ Liquid ☐ Sludge ☐ Slurry ☐ Gas ☐ Other  
12 SPECIAL HANDLING INSTRUCTIONS: ☐ Gloves ☐ Goggles ☐ Respirator ☐ Other

GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.

13 IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802 Signature of Authorized Agent and Title Asbury Oil Co. Date Shipped 6-22-81

TRANSPORTER (HAULER MUST COMPLETE) ASBURY OIL CO. PICK-UP DATE 6-22-81 TIME AM PM

14 NAME ADDRESS 13419 Halldale Avenue PHONE NO. (213) 321-1392 CITY, STATE, ZIP Gardena, California 90249 16 Signature of Authorized Agent and Title Asbury Oil Co. Date 6-22-81

TSD FACILITY (FACILITY OPERATOR MUST COMPLETE) 17 NAME Asbury Oil Co. QUANTITY (If Measured) 25 BBL 18 STATE FEE (If Any) 19

20 INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT: ☐ HANDLING OR DISPOSAL METHOD: ☐ Surface Impoundment ☐ Landfill ☐ Injection Well ☐ Land Treatment ☐ Treatment (Specify) ☐ Recovery or Reuse ☐ Storage/Transfer

22 NAME Asbury Oil Co. EPA NO. 11400 23 Signature of Authorized Agent and Title Asbury Oil Co. Date Accepted 6-22-81

TO GENERATOR

# Fluid Recycling

THE MOBILE SERVICE

DEMAND 77 FEB 92  
DATE

SERIAL  
NUMBER 0000

SERVICES ADDRESS:

ALLEN AIRCRAFT

11643 VANOWEN ST.

N. HOLLYWOOD, CA 91609

CONTACT PERSONNEL

Service: ROWLAND

Scheduled:

Other:

Account  
Number

Customer  
P.O. No

Tech.  
Name GLENN

Machine  
Number 00

COOLANT RECYCLED:

Manufacturer FARWEST

Product 3500

Type SKN

QUALITY CONTROL STANDARDS

STANDARD

DIRTY

TANK

CLEAN/

RECYCLED

TOTAL W/

NEW MIX

Gallons at job start

XXXXXXXX

500

Gallons at completion

XXXXXXXX

XXXXXXXX

450

470

pH

9.4

8.9

8.8

9.3

Refract reading

02.3

5.0

5.0

5.0

Mix Ratio

20:1

10:1

10:1

10:1

Color

BLUE

BLUE

BLUE

BLUE

Odor

NONE

NONE

NONE

NONE

TDS

XXXXXXXX

Total Gals  
Processed

453

Tramp Oil  
Skimmed

0

Tramp Oil  
Processed

3

Top Off  
Gals

15

Liner Changes

1

Run Temp

160°

F

Conc. Added

5

BIOCIDE: Sold

1

G

Added

3

Pt

Bio%-Final-Mix

0.10 %

Retained? (Y) N

ADDITIONS: AquaServ

ml

Sod. Om.

ml

Blue Dye

oz

Scent

oz

TECHNICIAN'S COMMENTS

PUMPED OUT CLEAN TANK INTO DIRTY AT START.

IFLUSH MACHINE WITH 30 G WATER INTO DIRTY.

Time In

835

a.m./p.m.

Time Out

10:00

a.m./p.m.

Technician Signature

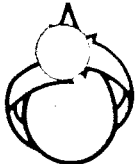
Customer Signature

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE



SERVICE DATE 12-18-89 SERVICE NUMBER 10103

SERVICED ADDRESS:

CONTACT PERSONNEL:

Allen Aircraft

Service: Roland

11643 VAN OWAN

Schedule: \_\_\_\_\_

N. Hollywood 91609

Other...: \_\_\_\_\_

Account Number \_\_\_\_\_

Customer P.O. No \_\_\_\_\_

Tech. Name DARRICK

Machine Number 7

COOLANT RECYCLED:

Manufacturer FAR West Product 3500 Type SUN

QUALITY CONTROL STANDARDS

STANDARD

DIRTY TANK

CLEAN/ RECYCLED

TOTAL W/ NEW MIX

Gallons at job start

XXXXXXXX

270+12

0

4200

Gallons at completion

XXXXXXXX

XXXXXXXX

260

500

pH

9.4

8.9

8.6

9.2

Refract reading

2.3

7.0

6.0

5.0

Mix Ratio

20:1

7:1

8:1

10:1

Color

Blue

Blue

Blue

Blue

Odor

Scented

Light Acid

scented

scented

Total Gals Processed 262

Tramp Oil Skimmed 0

Tramp Oil Processed 2

Top Off Gals 240

Liner Changes 1

Run Temp 170 F

Conc. Added 4

BIOCIDE: Sold 0 G Added 4 Pt Bio%-Final-Mix 10 % Retained? ☒ NO

ADDITIONS: AquaServ 0 ml Sod. Om. 0 ml Blue Dye 0 oz Scent 0 cc

TECHNICIAN'S COMMENTS Upon arrival pumped 12 g from clean tank to dirty tank. Hosed down dirty tank. Cust. will adj. mix ratio

Time In 7:00 a.m/p.m.

Time Out 3:45 a.m/p.m.

Darrick Stelmie  
Technician Signature

V. F. Farnham  
Customer Signature

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

12-18 84

SERVICED ADDRESS:

Allen Aircraft

11643 VANDOWEN

N. Hollywood 91609

Service: Roland

Schedule:

Other:

Other:

Account Number

Customer P.O. No

Tech. Name: Derrick

Mach. Number: 7

COOLANT RECYCLER West

3500

SYN

QUALITY CONTROL STANDARDS

STANDARD

DIRTY

CLEAN

TOTAL

TANK

RECYCLED

RECYCLED

Gallons at job start

XXXXXXXX

500 + 12

0

500

Gallons at completion

XXXXXXXX

XXXXXXXX

500

500

pH

9.4

8.9

8.6

9.2

Refract reading

2.3

7.0

6.0

6.0

Mix Ratio

20:1

7:1

8:1

3:1

Color

Blue

Blue

Blue

Blue

Odor

Scented

Light Rancid

Scented

Scented

Total Gals Processed: 502

Tramp Oil Skipped: 0

Tramp Oil Processed: 2

Top Off Gals: 0

Liner Changes: 1

Run Temp: 170 F

Conc. Added: 1

BIOCIDE: Sold: 6

Added: 4

Pt BioX-Final-Mix: 10

Samples Retained: 0

ADDITIONS: AquaServ: 0

ml Sod. Om: 0

ml Blue Dye: 0

oz Scent: 0

TECHNICIAN'S COMMENTS

Upon arrival pumped 12g from clean tank to dirty tank. Hose down clean tank. About 1pt fluid spilled. Fluid was cleaned up. Customer will adjust mix ratio

Time In: 7:00 a.m./p.m.

Time Out: 3:45 a.m./p.m.

Derrick Stantmire

Ray

Technician Signature

Customer Signature

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

## COOLANT RECYCLING SERVICE ORDER

SERVICED ADDRESS:

ALLEN AIRCRAFT  
11643 VANOWEN  
NORTH HOLLYWOOD

SERVICE DATE 14 Aug 29 SERIAL NUMBER 1649

CONTACT PERSONNEL:

Service: ROLAND

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Tech Name GLENN/KEN Machine Number 02

COOLANT RECYCLED:

Manufacturer FAR WEST Product 3500 Type SYN

QUALITY CONTROL STANDARDS STANDARD DIRTY TANK CLEAN/ RECYCLED TOTAL W/ NEW MIX

Gallons at job start XXXXXX 600 40 XXXXXX

Gallons at completion XXXXXX XXXXXX 676 820

pH 9.4 9.4 9.3 9.4

Refractometer reading 2.4 5.0 3.0 3.0

Mix Ratio 20:1 9:1 9:1 16:1

Color AQUA DARK AQUA AQUA AQUA

Odor NONE NONE NONE NONE

Total Gals Processed 645 Trap Oil Skinned 0 G Processed 9 G

Liner Run Temp 160° F Conc Added 4 G

Biocide Sold 1 G Biocide Added 6 Pt Bio % in final mix 0.075 Samples Retained Y N

Aqua Serv Added \_\_\_\_\_ ml Added \_\_\_\_\_ ml Added \_\_\_\_\_ oz Added \_\_\_\_\_ oz

TECHNICIAN'S COMMENTS: ADDED 200 G WATER FOR TOPPING OFF

Time In 0630 a.m./p.m.

GLENN  
Technician Signature

Time Out \_\_\_\_\_ a.m./p.m.

ROLAND  
Customer Signature

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

## COOLANT RECYCLING SERVICE ORDER

SERVICE DATE 6-23-87 SERIAL NUMBER 1490

SERVICED ADDRESS THE MOBILE SERVICE

CONTACT PERSONNEL:

Service: ROLAND

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Tech Name RENÉ Machine Number 6-2070

COOLANT RECYCLED:  
Manufacturer FAR WEST Product 3500 Type SYN

QUALITY CONTROL STANDARDS	STANDARD	DIRTY TANK	CLEAN/ RECYCLED	TOTAL W/ NEW MIX
Gallons at job start	XXXXXX	<u>450 475</u>	<u>425 375</u>	XXXXXX
Gallons at completion	XXXXXX	XXXXXX	<u>500 500</u>	_____
pH	<u>9.4</u>	<u>10.9 10.9</u>	<u>10.7 10.8</u>	<u>11.1 11.1</u>
Refractometer reading	<u>2.3</u>	<u>7.0 7.0</u>	<u>7.0 7.0</u>	<u>2.3 2.3</u>
Mix Ratio	<u>20:1</u>	<u>7:1 7:1</u>	<u>7:1 7:1</u>	<u>20:1 20:1</u>
Color	<u>GREEN</u>	<u>B.L. GREEN</u>	<u>GREEN GREEN</u>	<u>GREEN GREEN</u>
Odor	<u>SCENTED</u>	<u>RUCCIDE</u>	<u>NORMAL</u>	<u>NORMAL NODOR</u>
Total Gals Recycled <u>431/379</u>	Tramp Oil Skimmed <u>Ø</u>	Tramp Oil Processed <u>6/4</u>		
Liner Changes <u>1</u>	Run Temp <u>140-150 F</u>	Conc Added <u>Ø</u>		
Biocide Sold <u>1</u> G	Biocide Added <u>8</u> Pt.	Bio % in final mix <u>10</u>	Samples Retained <u>Y</u>	
Aqua Serv Added <u>Ø</u>	Sod. Om. ml Added <u>300</u>	Blue Dye ml Added _____	Scent oz Added _____	

TECHNICIAN'S COMMENTS: PUMPED BOTH ~~DIRTY~~ CLEAN TANKS INTO DIRTY TANK 50 GALS. EACH. ADDED WATER TO ADJUST MIX RATIO.

Time In 8:00 a.m./p.m.

Time Out 1:10 a.m./p.m.

Technician Signature \_\_\_\_\_

Customer Signature \_\_\_\_\_

# Fluid Recycling

## COOLANT RECYCLING SERVICE ORDER

SERVICED ADDRESS: **THE MOBILE SERVICE**

Allen Aircraft  
11643 Vanowen St  
N. Hollywood.

SERVICE DATE 4-20-89 SERIAL NUMBER 1284

CONTACT PERSONNEL:

Service: Ray Thomas

Schedule: CROLAND

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_

Tech Name Mouty Machine Number 3

COOLANT RECYCLED:

Manufacturer Hargers Fines Product 5-500 Type SOL

QUALITY CONTROL STANDARDS	STANDARD	DIRTY TANK	CLEAN/ RECYCLED	TOTAL W/ NEW MIX
Gallons at job start	XXXXXX	<u>500</u>	<u>500</u>	XXXXXX
Gallons at completion	XXXXXX	XXXXXX	<u>500</u>	
pH	<u>9.1</u>	<u>7.8</u>	<u>7.8</u>	
Refractometer reading	<u>5.0</u>	<u>4.6</u>	<u>5.0</u>	
Mix Ratio	<u>20:1</u>	<u>23:1</u>	<u>20:1</u>	
Color	<u>white</u>	<u>white</u>	<u>white</u>	
Odor	<u>none</u>	<u>lightly acidic</u>	<u>NORMAL</u>	
Total Gals Recycled <u>518</u>	Tramp Oil Skimmed <u>0</u>	Tramp Oil Processed <u>18</u>		
Liner Changes <u>1</u>	Run Temp <u>160-170 F</u>	Conc Added <u>0</u>		
Biocide Sold <u>1</u> G	Biocide Added <u>6</u> Pt	Bio % in final mix <u>.159</u>	Samples Retained <u>(Y)</u> N	
Aqua Serv Added <u>0</u> ml	Sod. Om. Added <u>0</u> ml	Blue Dye Added <u>0</u> oz	Scent Added <u>0</u> oz	

TECHNICIAN'S COMMENTS: Pumped 300 gals into Dirty Tank  
that was in Retaining Tank. & clean tank

Time In 7 a.m./p.m.

Marty Klugema  
Technician Signature

Time Out 10 a.m./p.m.

Ralph W. Peters  
Customer Signature



# Fluid Recycling

## COOLANT RECYCLING SERVICE ORDER

SERVICED ADDRESS: **THE MOBILE SERVICE**

Allen Aircraft  
116 43 Vanowen St  
N. Hollywood

SERVICE DATE 4-19-89 SERIAL NUMBER 1285

CONTACT PERSONNEL:

Service: Roy Terone

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Tech Name Morty Machine Number 3 (RD76)

COOLANT RECYCLED:  
Manufacturer FAIRWEST Product 3500 Type 54W

QUALITY CONTROL STANDARDS	STANDARD	TANK	CLEAN/ RECYCLED	TOTAL W/ NEW MIX
Gallons at job start	XXXXXX	500 450	0 0	XXXXXX
Gallons at completion	XXXXXX	XXXXXX	375 375	500 500
pH	9.4	8.6 8.6	8.6 8.5	8.9 8.9
Refractometer reading	2.1	6.0 6.0	6.0 6.0	2.6 2.6
Mix Ratio	20:1	8:1 8:1	8:1 8:1	18:1 18:1
Color	green	green green	green green	green green
Odor	None	None None	None None	None None
Total Gals Recycled	753	Tramp Oil Skimmed	0 G	Tramp Oil Processed 3 G
Liner Changes	2	Run Temp	110-110°F	Conc Added 0 G
Biocide Sold 1 G	Added 12 Pt	Bio % in final mix	.15%	Samples Retained (Y) N
Aqua Serv Added 0 ml	Sod. Om. Added 0 ml	Blue Dye Added 0 oz	Scent Added 0 oz	

TECHNICIAN'S COMMENTS: added 125 GALLONS of  
water to adjust mix ratio to  
each TANK.

Time In 9 (a.m.)/p.m.

Time Out \_\_\_\_\_ a.m./p.m.

Technician Signature

Customer Signature

# Fluid Recycling

THE MOBILE SERVICE

## COOLANT RECYCLING SERVICE ORDER

SERVICE DATE 20 FEB 71 SERIAL NUMBER 1124

CONTACT PERSONNEL:

Service: ROLLAND; RAY TERRELL

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

SERVICED ADDRESS:

ALLEN AIRCRAFT

11693 VANOWEN ST.

NORTH HOLLYWOOD, CA 91507

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Tech Name GLENN Machine Number 02

COOLANT RECYCLED:

Manufacturer HANGSTERFERS Product C-500 Type SOL

QUALITY CONTROL STANDARDS	STANDARD	DIRTY TANK	CLEAN/RECYCLED	TOTAL W/ NEW MIX
Gallons at job start	XXXXXX	CONTAM TANK + 440 <sup>200</sup>	0	XXXXXX
Gallons at completion	XXXXXX	XXXXXX	362	440
pH	9.1	7.9	8.0	8.2
Refractometer reading	5.0	3.3	3.3	6.6
Mix Ratio	20:1	34:1	34:1	15:1
Color	AQUA <del>WHITE</del>	WHITE	BROWN WHITE	AQUA
Odor	SCENT	PLENCH	NONE	SCENT
Total Gals Recycled	377	Tramp Oil Skimmed	0	Tramp Oil Processed
Liner Changes	1	Run Temp	150° F	Conc Added
Biocide Sold	1 G	Biocide Added	1 pt	Bio % in final mix
Aqua Serv Added	_____ ml	Sod. Om. Added	_____ ml	Blue Dye Added
				oz Added

TECHNICIAN'S COMMENTS: CLEAN TANK WAS HOSED DOWN AND PUMPED  
INTO DIRTY TANK - PUMPING CONTAMINANT INTO DIRTY TANK. ADDED  
50 G WATER TO PREMIX CONCENTRATE

Time In 800 a.m./p.m.

Time Out 130 a.m./p.m.

Technician Signature

Customer Signature

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

SERVICED ADDRESS:

ALLEN AIRCRAFT

11643 VANOWEN ST.

NORTH HOLLYWOOD, CA 91609

Account  
Number

Customer  
P.O. No.

SERVICE

DATE 20 FEB 89

SERIAL

NUMBER 1079

CONTACT PERSONNEL:

Service: ROLAND

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Tech

Name GLENN

Machine

Number 02

COOLANT RECYCLED:

Manufacturer EARWEST

Product 3500

Type SYN

QUALITY CONTROL STANDARDS

STANDARD

DIRTY  
TANK

CLEAN/  
RECYCLED

TOTAL W/  
NEW MIX

Gallons at job start

XXXXXX

TANK A+B  
890

0

XXXXXX

Gallons at completion

XXXXXX

XXXXXX

738

880

pH

9.4

9.1

9.0

9.4

Refractometer reading

2.2

7.0

7.0

2.5

Mix Ratio

20:1

7:1

7:1

18:1

Color

BLUE

LT  
BLUE

LT  
BLUE

BLUE

Odor

SCENT  
HEAVY

RAVINT

NONE

SCENT

Total Gals

Recycled 747

Tramp Oil

Skimmed

0 G

Tramp Oil

Processed

9 G

Liner

Changes 1

Run

Temp 150° F

Conc

Added

0 G

Biocide

Biocide

Added 2 G

Bio % in

final mix

0.10

Samples

Retained 0 N

Aqua Serv

Sod. Om.

Blue Dye

Scent

Added

ml Added

ml Added

2 oz

Added

2 oz

TECHNICIAN'S COMMENTS:

ADDED 2 1/2 G TO BRING TO 18:1 AT THERE

REQUEST.

Time In

1:31

a.m./p.m. (p.m.)

Time Out

5:00

a.m./p.m. (p.m.)

Technician Signature

Customer Signature

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

## COOLANT RECYCLING SERVICE ORDER

SERVICE DATE 12/11/88 SERIAL NUMBER 916

CONTACT PERSONNEL:

Service: \_\_\_\_\_

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

SERVICED ADDRESS:

ALLAN AIRCRAFT SUPPLY

11643 VANOVEN ST.

NORTH HOLLYWOOD CA

- 91609

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_

Tech Name Ray/Dan Machine Number #6

COOLANT RECYCLED:

Manufacturer FAR WEST Product PS-500 Type SYN.

QUALITY CONTROL STANDARDS	STANDARD	DIRTY TANK	CLEAN/ RECYCLED	TOTAL W/ NEW MIX
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Gallons at job start	<u>XXXXXX</u>	<u>500</u>	<u>0</u>	<u>XXXXXX</u>
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Gallons at completion	<u>XXXXXX</u>	<u>XXXXXX</u>	<u>450</u>	<u><del>500</del> 500</u>
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pH	<u>9.4</u>	<u>10</u>	<u>9.4</u>	<u>9.5</u>
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Refractometer reading	<u>2.4</u>	<u>3.2</u>	<u>2.4</u>	<u><del>3.2</del> 2.8</u>
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Mix Ratio	<u>20:1</u>	<u>14:1</u>	<u>20:1</u>	<u>17:1</u>
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Color	<u>GRN</u>	<u>LT GRN.</u>	<u>GRN.</u>	<u>GRN.</u>
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Odor	<u>SCENT</u>	<u>LT SCENT</u>	<u>SCENT</u>	<u>SCENT</u>
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Total Gals Recycled <u>470</u>	Tramp Oil Skimmed <u>110</u> G	Tramp Oil Processed <u>20</u> G
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Liner Changes <u>1</u>	Run Temp <u>170°</u> F	Conc Added <u>3 + 47 Gals</u> G
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Biocide Sold <u>0</u> G	Biocide Added <u>4</u> Pts	Bio % in final mix <u>10%</u>	Samples Retained <u>Y</u> <u>N</u>
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Aqua Serv Added <u>0</u> ml	Sod. Om. Added <u>0</u> ml	Blue Dye Added <u>0</u> oz	Scent Added <u>0</u> oz
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TECHNICIAN'S COMMENTS: UPON ARRIVAL TECH PUMP. 150 GA.

OF DIRTY COOLANT INTO THE OTHER DIRTY TANK. TECH PUMP  
25 GA. OF OLD COOLANT FROM CLEAN TANK INTO DIRTY  
TANK. AND WASHOUT INTO DIRTY TANK WITH HOSE

Time In 6:30 a.m./p.m.

Time Out 1:15 a.m./p.m.

Technician Signature [Signature]

Customer Signature [Signature]

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

SUMP CHANGING /  
CLEANING

## SERVICE ORDER

SERVICE DATE 11/1/88 SERIAL NUMBER 6255

### SERVICED ADDRESS:

Allen Aircraft  
11643 Vanowen St  
N. Hollywood, Ca 91609

### CONTACT PERSONNEL:

Service: \_\_\_\_\_

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Tech Name Loof Machine Number Iona

### COOLANT IN USE:

Manufacturer \_\_\_\_\_ Product \_\_\_\_\_ Type \_\_\_\_\_

SPECIAL INSTRUCTIONS: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

	STANDARD	DIRTY	CLEAN
Gallons moved	<u>XXXXXX</u>	_____	_____
Gallons at completion	_____	_____	_____
Refractometer reading	_____	_____	_____
Mix ratio	_____	_____	_____

Number of sumps changed/cleaned \_\_\_\_\_ Tramp oil skimmed 140 gals G

TECHNICIAN'S COMMENTS: We skimmed 140 gals of oil from clean coolant tank

\_\_\_\_\_  
\_\_\_\_\_

Time In 10:30 (a.m.)/p.m.

Time Out 11:30 (a.m.)/p.m.

[Signature]  
Technician Signature

[Signature]  
Customer Signature

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

HYDRAULIC OIL ON TOP OF RECYCLED  
500 GAL. DRUMS 55 GAL. DRUM WE USE 10  
COOLANT RECYCLING

## SERVICE ORDER

SERVICED ADDRESS:

ALLEN AIRCRAFT  
11643 VANOWEN ST  
N. HOLLYWOOD, CA 91609

SERVICE DATE 10-27-88 SERIAL NUMBER 710

CONTACT PERSONNEL:

Service: ROWLAND

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Tech Name RICH HAMEL Machine Number 2

COOLANT RECYCLED:

Manufacturer FAR WEST Product 3500 Type SYN

QUALITY CONTROL STANDARDS	STANDARD	DIRTY TANK	CLEAN/ RECYCLED	TOTAL W/ NEW MIX
Gallons at job start	<u>XXXXXX</u>	<u>* 700</u>	<u>* 0</u>	<u>XXXXXX</u>
Gallons at completion	<u>XXXXXX</u>	<u>XXXXXX</u>	<u>650</u>	<u>* 950</u>
pH	<u>9.4</u>	<u>8.4</u>	<u>8.3</u>	<u>9.0</u>
Refractometer reading	<u>2.4</u>	<u>2.8</u>	<u>2.6</u>	_____
Mix Ratio	<u>20:1</u>	<u>16:1</u>	<u>19:1</u>	_____
Color	<u>GREEN</u>	<u>GREEN</u>	<u>GREEN</u>	_____
Odor	<u>NONE</u>	<u>LIGHT RANCIDITY</u>	<u>NONE</u>	_____
Total Gals Recycled <u>650</u>	Tramp Oil Skimmed <u>0</u>	Tramp Oil Processed <u>9</u>	Conc Added <u>0</u>	Samples Retained <u>Y</u>
Changes <u>1</u>	Temp <u>160-170 F</u>	Bio % in final mix <u>0.15%</u>		
Biocide Sold <u>1</u> G	Biocide Added <u>1 1/2</u> G			

TECHNICIAN'S COMMENTS: \* 2 DIRTY TANKS AND 2 CLEAN TANKS  
(SOLIDS FROM LINER PLACE IN TRASH BIN AS PER CUSTOMERS  
REQUEST) ADDED 300 GALS WATER TO SECOND CLEAN TANK-NO  
CONCENTRATE NEEDED

Time In 7:25 a.m./p.m.

Time Out 1:40 a.m./p.m.

R. Hamel  
Technician Signature

Robert L. Whitman  
Customer Signature

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

## COOLANT RECYCLING SERVICE ORDER

SERVICE DATE 9/7/88 SERIAL NUMBER 578

SERVICED ADDRESS:

Allen Aircraft  
part 1 of 2

CONTACT PERSONNEL:

Service: \_\_\_\_\_

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Tech Name KURT Machine Number 5108

COOLANT RECYCLED:

Manufacturer Hungstefer Product S-500 Type Sol Oil

QUALITY CONTROL STANDARDS	STANDARD	DIRTY TANK	CLEAN/ RECYCLED	TOTAL W/ NEW MIX
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Gallons at job start	XXXXXX	<u>500</u>	<u>0</u>	XXXXXX
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Gallons at completion	XXXXXX	XXXXXX	<u>475</u>	<u>475</u>
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pH	<u>9.1</u>	<u>8.1</u>	<u>8.1</u>	<u>8.9</u>
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Refractometer reading	<u>5.0</u>	<u>5.0</u>	<u>5.0</u>	<u>5.0</u>
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Mix Ratio	<u>20:1</u>	<u>20:1</u>	<u>20:1</u>	<u>20:1</u>
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Color	<u>WHT</u>	<u>Grey</u>	<u>WHT</u>	<u>WHT</u>
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Odor				
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Total Gals Recycled	<u>502</u>	Tramp Oil Skimmed	<u>50</u> G	Tramp Oil Processed	<u>27</u> G
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Liner Changes	<u>1</u>	Run Temp	<u>180</u> F	Conc Added	<u>0</u> G
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Biocide Sold	<u>1</u> G	Biocide Added	<u>6</u> Pt	Bio % in final mix	<u>.15%</u>	Samples Retained	Y <u>(N)</u>
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TECHNICIAN'S COMMENTS:

Time In 8:00 a.m./p.m.

Technician Signature Kurt

Time Out 2:45 a.m. (p.m.)

Customer Signature [Signature]

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

## COOLANT RECYCLING SERVICE ORDER

SERVICE DATE 9/7/88 SERIAL NUMBER 579

SERVICED ADDRESS:

Allen Aircraft  
part 2 of 2

CONTACT PERSONNEL:

Service: \_\_\_\_\_

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Tech Name Kurt Machine Number 08

COOLANT RECYCLED: Manufacturer Fairwest Product 3500 Type Syn.

QUALITY CONTROL STANDARDS	STANDARD	DIRTY TANK	CLEAN/ RECYCLED	TOTAL W/ NEW MIX
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Gallons at job start	<u>XXXXXX</u>	<u>435</u>	<u>0</u>	<u>XXXXXX</u>
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Gallons at completion	<u>XXXXXX</u>	<u>XXXXXX</u>	<u>400</u>	<u>400</u>
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pH	<u>9.4</u>	<u>7.9</u>	<u>7.8</u>	<u>8.7</u>
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Refractometer reading	<u>2.2</u>	<u>2.4</u>	<u>2.2</u>	<u>2.2</u>
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Mix Ratio	<u>20:1</u>	<u>18:1</u>	<u>20:1</u>	<u>20:1</u>
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Color	<u>Blue</u>	<u>Blue</u>		<u>Blue</u>
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Odor \_\_\_\_\_

Total Gals Recycled	<u>417</u>	Tramp Oil Skimmed	<u>15</u> G	Tramp Oil Processed	<u>17</u> G
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Liner Changes	<u>1</u>	Run Temp	<u>180</u> F	Conc Added	<u>0</u> G
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Biocide Sold	<u>1</u> G	Biocide Added	<u>5</u> Pt	Bio % in final mix	<u>15%</u>	Samples Retained	Y <u>N</u>
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TECHNICIAN'S COMMENTS: \_\_\_\_\_

Time In 8<sup>00</sup> a.m./p.m. Time Out 2:45 a.m./p.m.

Technician Signature [Signature]

Customer Signature [Signature]

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER



# Fluid Recycling

THE MOBILE SERVICE

## COOLANT RECYCLING SERVICE ORDER

SERVICE DATE 8-31-88 SERIAL NUMBER 613

SERVICED ADDRESS:

Allan Aircraft  
11643 Vandewen ST.  
N. Hollywood, Ca 91609

CONTACT PERSONNEL:

Service: Roland.

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Tech Name Pete Machine Number 01

COOLANT RECYCLED:

Manufacturer Far West Product 3500 Type Syn

QUALITY CONTROL STANDARDS	STANDARD	DIRTY TANK	CLEAN/ RECYCLED	TOTAL W/ NEW MIX
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Gallons at job start	<u>XXXXXX</u>	<u>490</u>	<u>2</u>	<u>XXXXXX</u>
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Gallons at completion	<u>XXXXXX</u>	<u>XXXXXX</u>	<u>450</u>	<u>500</u>
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pH	<u>9.4</u>	<u>6.4</u>	<u>6.6</u>	<u>8.7</u>
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Refractometer reading	<u>1.6</u>	<u>0.8</u>	<u>0.8</u>	<u>3.0</u>
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Mix Ratio	<u>20:1</u>	<u>35:1</u>	<u>35:1</u>	
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Color	<u>Green</u>	<u>Greenish Blue</u>	<u>Greenish Blue</u>	
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Odor	<u>Scented</u>	<u>Heavy rancidity</u>	<u>None</u>	<u>Scented</u>
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Total Gals Recycled	<u>450</u>	Tramp Oil Skimmed	<u>10</u> G	Tramp Oil Processed	<u>2</u> G
Liner Changes	<u>1</u>	Run Temp	<u>170</u> F	Conc Added	<u>12</u> G
Biocide Sold	<u>G</u>	Biocide Added	<u>50</u> Pt	Bio % in final mix	<u>100</u>
				Samples Retained	<u>Y N</u>

TECHNICIAN'S COMMENTS: Upon arrival skimmed oil out of dirty Tank and pumped old coolant out of clean tank into dirty tank. Also hosed down the inside of clean tank.

Time In 8:00 a.m./p.m.

Time Out 3:00 a.m./p.m.

Technician Signature

Customer Signature

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

## MISCELLANEOUS SERVICE ORDER

SERVICE DATE 8/19/88 SERIAL NUMBER 9502

SERVICED ADDRESS:

Allen Aircraft  
North Hollywood

CONTACT PERSONNEL:

Service: \_\_\_\_\_

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Tech Name KURT Machine Number 08

SERVICES PERFORMED: Installed Labels to tanks

Gallons Recycled _____	Fluids Skimmed _____ G	Fluids Processed _____ G
Liner Changes _____	Run Temp _____ F	Additive Added _____ G

TECHNICIAN'S COMMENTS: Order 2 more "Farwest"  
Synthetic labels to be installed at  
a later date

Time In 10:00 (a.m.)/p.m.

Time Out 11:20 (a.m.)/p.m.

[Signature]  
Technician Signature

[Signature]  
Customer Signature

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

## COOLANT RECYCLING SERVICE ORDER

SERVICE DATE 8/11/83 SERIAL NUMBER 542

CONTACT PERSONNEL:

Service: \_\_\_\_\_

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Tech Name DAN Machine Number 6

### COOLANT RECYCLED:

Manufacturer Hansterfer Product S-500 Type 50/50 oil

QUALITY CONTROL STANDARDS	STANDARD	DIRTY TANK	CLEAN/ RECYCLED	TOTAL W/ NEW MIX
Gallons at job start	XXXXXX	<u>500</u>	<u>Q</u>	XXXXXX
Gallons at completion	XXXXXX	XXXXXX	<u>33</u>	<u>335</u>
pH	<u>9.1</u>	<u>7.8</u>	<u>7.9</u>	<u>7.9</u>
Refractometer reading	<u>5.0</u>	<u>1.4</u>	<u>1.4</u>	<u>1.4</u>
Mix Ratio	<u>20:1</u>	<u>71:1</u>	<u>71:1</u>	<u>71:1</u>
Color	<u>White</u>	<u>Blue</u>	<u>Blue</u>	<u>Blue</u>
Odor	<u>Scented</u>	<u>*RINCED*</u>	<u>NONE</u>	<u>Scented</u>
Total Gals Recycled <u>247</u>	Tramp Oil Skimmed <u>Q</u>	Tramp Oil Processed <u>Q</u>	Conc Added <u>10 - 2000 G</u>	Samples Retained Y <u>(N)</u>
Liner Changes <u>1</u>	Run Temp <u>160° F</u>	Bio % in final mix <u>15%</u>		
Biocide Sold <u>1</u> G	Biocide Added <u>6 pps</u> Pt			

TECHNICIAN'S COMMENTS: Power unit coolant removed  
and replaced with 50/50 coolant  
at 10:30 AM. 1.5% bio added.

Time In 10:30 (a.m.) /p.m. Time Out 1:30 a.m./ (p.m.)

Technician Signature \_\_\_\_\_

Customer Signature \_\_\_\_\_

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

## COOLANT RECYCLING SERVICE ORDER

SERVICED ADDRESS:

TANK (A)

SERVICE

DATE

9/11/88

SERIAL

NUMBER

541

CONTACT PERSONNEL:

Service:

Schedule:

Other:

Account  
Number

Customer  
P.O. No.

Tech

Name

DAN

Machine

Number

6

COOLANT RECYCLED:

Manufacturer

HANISTERERS

Product

5500

Type

Sol oil

QUALITY CONTROL STANDARDS

STANDARD

DIRTY  
TANK

CLEAN/  
RECYCLED

TOTAL W/  
NEW MIX

Gallons at job start

XXXXXX

475

2

XXXXXX

Gallons at completion

XXXXXX

XXXXXX

450

500

pH

9.1

8.0

8.1

9.1

Refractometer reading

5.0

1.6

1.6

5.6

Mix Ratio

20:1

43:1

63:1

18:1

Color

white

4 Blue

Blue

Blue

Odor

Scented

NONE

NONE

Scented

Total Gals

Recycled

Liner

Changes

Biocide

Sold

Biocide

Added

Tramp Oil

Skimmed

Run

Temp

Bio % in

final mix

Tramp Oil

Processed

Conc

Added

Samples

Retained Y (N)

TECHNICIAN'S COMMENTS:

Tech Blew

100 AMP FUSE.

DOWN TIME

20 min

Time In 5:00

a.m./p.m.

Time Out

10:30

a.m./p.m.

Technician Signature

Customer Signature

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

## COOLANT RECYCLING SERVICE ORDER

SERVICE DATE 6/2/88 SERIAL NUMBER 331

SERVICED ADDRESS:

Allen Aircraft  
11643 Vanowen St  
N Hollywood Ca 91609

CONTACT PERSONNEL:

Service: \_\_\_\_\_

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Tech Name Kurt Machine Number 5101

COOLANT RECYCLED:

Manufacturer Farnwest Product 3500 Type Semi

QUALITY CONTROL STANDARDS STANDARD DIRTY TANK CLEAN/ RECYCLED TOTAL W/ NEW MIX

Gallons at job start XXXXXX 950 0 XXXXXX

Gallons at completion XXXXXX XXXXXX 900 950

pH 9.4 8.8 6.3 8.8

Refractometer reading 1.2 2.1 1.0 2.4

Mix Ratio 20:1 40:1 40:1 18:1

Color Green Grey Blue LT Blue Blue

Odor \_\_\_\_\_ Rotten Egg \_\_\_\_\_

Gallons Recycled 1 Tramp Oil Skimmed 0 G Tramp Oil Processed 22 G  
Liner Changes 1 Run Temp 170 F Conc Added 25 G  
Biocide Sold 2 G Biocide Added 1.5 G Bio % in final mix 16% Samples Retained (Y) N

TECHNICIAN'S COMMENTS: A Sodium Amadine treatment was necessary to treat a solid fungus growth in dirty tank. (525 ml was Added)

Time In 715 a.m./p.m.

Time Out 530 a.m./p.m.

Technician Signature [Signature]

Customer Signature [Signature]

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

## COOLANT RECYCLING SERVICE ORDER

SERVICE DATE 4/11/88 SERIAL NUMBER 178

SERVICED ADDRESS:

Allan Aircraft  
11643 Van Over St  
N. Hollywood, CA. 91609

CONTACT PERSONNEL:

Service: \_\_\_\_\_

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Tech Name Pete Maglio Machine Number 51-06  
Dan Skirbs

COOLANT RECYCLED:

Manufacturer For West Product 3500 Type Syn.

QUALITY CONTROL STANDARDS STANDARD DIRTY TANK CLEAN/ RECYCLED TOTAL W/ NEW MIX

Gallons at job start XXXXXX 450 0 XXXXXX

Gallons at completion XXXXXX XXXXXX 390 70

pH 9.1 8.2 8.1 2.7

Refractometer reading 2.2 2.2 1.6 2.2

Mix Ratio 20:1 20:1 27:1 20

Color Green 4 Blue Blue Blue

Odor Scented Rancid Scented Oil

Gallons Recycled 417 Tramp Oil Skimmed 0 G Tramp Oil Processed 27 G

Liner Changes 1 Run Temp 170 F Conc Added 5 G

Biocide Sold 1 G Biocide Added 57.5 G Bio % in final mix .15 Samples Retained Y N

TECHNICIAN'S COMMENTS: Upon arrival pump 30 G of old coolant  
from clean bank into dirty tank. Loss 30 G of dirty tank  
#1 & pump out into Dirty Tank #2

Time In 7:00 a.m./p.m.

Time Out 10:30 a.m./p.m.

Technician Signature

Customer Signature

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

## COOLANT RECYCLING SERVICE ORDER

SERVICE DATE 4/11/83 SERIAL NUMBER 179

SERVICED ADDRESS:

Allan Aircraft  
11643 Van Owen St.  
N. Hollywood, CA. 91609

CONTACT PERSONNEL:

Service: \_\_\_\_\_

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Tech Name Pete Mader Machine Number 51-016  
Don St. Denis

COOLANT RECYCLED:

Manufacturer For West Product 3500 Type Syn

QUALITY CONTROL STANDARDS STANDARD DIRTY TANK CLEAN/ RECYCLED TOTAL W/ NEW MIX

Gallons at job start XXXXXX 500 Q XXXXXX

Gallons at completion XXXXXX XXXXXX 450 460

pH 9.1 8.5 8.4 8.7

Refractometer reading 2.2 2.4 1.6 3.2

Mix Ratio 20:1 19:1 27:1 14:1

Color Green 4 blue Blue Blue

Odor Scented Raw Scented Scented

Gallons Recycled 485 Tramp Oil Skimmed Q G Tramp Oil Processed 35 G  
Liner Run Temp 170 F Conc Added 6 G  
Biocide Sold 1 G Biocide Added 5pts Bio % in final mix 15 Samples Retained Y (N)

TECHNICIAN'S COMMENTS: Note loss of power shut down for hour and a half.

Time In 10:30 (a.m./p.m.)

Time Out 12:30 a.m./p.m.

Technician Signature

Customer Signature

Fluid Recycling Service, Inc., 1717 Newport Circle, Santa Ana, California 92705-5196, (714) 754-7220

CUSTOMER

# Fluid Recycling

THE MOBILE SERVICE

## OIL PURIFICATION SERVICE ORDER

SERVICE DATE 4/11/88 SERIAL NUMBER 8021

SERVICED ADDRESS:

Allan Aircraft  
11643 Van Owen St.  
N. Hollywood, CA. 91609

CONTACT PERSONNEL:

SERVICE: \_\_\_\_\_

SCHEDULE: \_\_\_\_\_

OTHER: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Technician Name Peter Maglio Machine Number 51-06  
Dan Stierbis

OIL PROCESSED:

Manufacturer \_\_\_\_\_ Product oil Type \_\_\_\_\_

Specific Gravity \_\_\_\_\_

SPECIAL INSTRUCTIONS: OIL

Gallons Recycled 0 Water Decanted 0 Water from Processing 250

Solids Removed 1/2 cups Run Temp 200 F Additive if any 0 Quantity 0

TECHNICIAN'S COMMENTS: Had to shut down due to  
plant closing will finish job on 4/12/88

Time In 2:30 a.m. p.m. Time Out 4:45 a.m. p.m.

Peter Maglio  
Technician Signature

[Signature]  
Customer Signature



# Fluid Recycling

THE MOBILE SERVICE

## OIL PURIFICATION SERVICE ORDER

SERVICE  
DATE 4/12/88

SERIAL  
NUMBER 8023

SERVICED ADDRESS:

Airport Aircraft Supply Co  
11643 Van Owen St  
N Hollywood CA 91609

CONTACT PERSONNEL:

SERVICE: \_\_\_\_\_

SCHEDULE: \_\_\_\_\_

OTHER: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Technician Name Pete Maglio Machine Number 51-016

2AU SERVOIS

OIL PROCESSED:

Manufacturer \_\_\_\_\_ Product Hydraulic oil Type \_\_\_\_\_

Specific Gravity \_\_\_\_\_

SPECIAL INSTRUCTIONS: \_\_\_\_\_

Gallons Recycled 400 Water Decanted 10 Water from Processing 20

Solids Removed 2 cups Run Temp 232 F Additive if any x Quantity x

TECHNICIAN'S COMMENTS: minor spill inside trailer. Blew fuse. 1 hr  
down + rep.

Time In 7:30 a.m. Time Out \_\_\_\_\_ a.m.  
p.m. p.m.

Pete H. Maglio  
Technician Signature

[Signature]  
Customer Signature

# Fluid Recycling

THE MOBILE SERVICE

## OIL PURIFICATION SERVICE ORDER

SERVICE  
DATE \_\_\_\_\_

SERIAL  
NUMBER 8019

SERVICED ADDRESS:

Allan Aircraft Supply Co.  
11643 Vanowen ST.  
N. Hollywood Ca 91609

CONTACT PERSONNEL:

SERVICE: \_\_\_\_\_

SCHEDULE: \_\_\_\_\_

OTHER: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Technician Name Pete Maglio Machine Number 51-00

OIL PROCESSED:

Manufacturer \_\_\_\_\_ Product \_\_\_\_\_ Type \_\_\_\_\_

Specific Gravity \_\_\_\_\_

SPECIAL INSTRUCTIONS: pumped 750 gals of dirty oil out  
of drums into 1200 gal Tank

Gallons Recycled X Water Decanted X Water from Processing X

Solids Removed X cups Run Temp X F Additive if any \_\_\_\_\_ Quantity \_\_\_\_\_

TECHNICIAN'S COMMENTS: \_\_\_\_\_

Time In 8:00 a.m. Time Out \_\_\_\_\_ a.m.  
p.m. p.m.

Peter H Maglio  
Technician Signature

[Signature]  
Customer Signature

# Fluid Recycling

THE MOBILE SERVICE

## COOLANT RECYCLING SERVICE ORDER

SERVICE DATE 2/18/88 SERIAL NUMBER 00

SERVICED ADDRESS:

Allan Aircraft  
11643 Vanowen St  
N. Hollywood Ca 91609

CONTACT PERSONNEL:

Service: Roland

Schedule: \_\_\_\_\_

Other: \_\_\_\_\_

Account Number \_\_\_\_\_ Customer P.O. No. \_\_\_\_\_ Technician Name KURT Machine Number 5168

COOLANT RECYCLED:

Manufacturer FAIRWEST Product 3500 Type Synthetic

SPECIAL INSTRUCTIONS: Hungate's coolant was recycled, per Roland's request, Fairwest concentrate was added to adjust mix ratio. Customer will assume all responsibility.

QUALITY CONTROL STANDARDS

Gallons at job start  
Gallons at completion  
pH  
Refractometer reading  
Mix Ratio  
Color  
Odor

STANDARD

XXXXXX  
XXXXXX  
9.4  
2.2  
20:1  
LT Green

DIRTY  
TANK 1

675  
25  
7.8  
2.2  
20:1

CLEAN/  
RECYCLED 2

0  
350  
7.9  
2.2  
20:1

TOTAL W/  
NEW MIX 2

XXXXXX  
450  
9.6  
2.4  
18:1  
Blue

Gallons Recycled 650 Tramp Oil Skimmed 15 gals Tramp Oil Processed 15 gals  
Solids Removed 1.9 cups Run Temp 165 F Concentrate Added 4/5 gals  
Biocide Sold 1 gals Biocide Added 1 gals Biocide % in final mix 10% Samples Retained Y N

TECHNICIAN'S COMMENTS: Added 3 oz Blue color. Added 100 gallons water per tank

Time In 700 a.m./p.m.

K. D. S. [Signature]  
Technician Signature

Time Out 1:30 a.m./p.m.

[Signature]  
Customer Signature



fluid  
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1717 Newport de  
Santa Ana, California 92705  
714-754-7220

WORK ORDER  
No. 2931

DATE 12/26

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RECYCLING SERVICE

300 COOLANT 400  
300 HYDRAULIC OIL  
300 CUTTING OIL  
300 EDM FLUID  
300 QUENCHING FLUID  
300 OILY WATER  
OTHER

TIME IN 7:00 am/pm  
TIME OUT 3:00 am/pm  
Upon arrival pumped  
100 gals of Dirty  
Coolant out of Tank #1  
into Dirty Tank #1  
and pumped 100 gals of

OTHER SERVICES

301 COOLANT  
CONDITIONER  
MACHINE CLEANER  
315 SET-UP  
OTHER PRODUCTS  
OTHER SERVICES

Clean transferers S-500  
out of 500 gal tank and  
into Dirty Tank #1  
Gals. added 10 gals of coolant  
concentrate with 100 gals  
of water.  
added Blue dye

COMMENTS

PRODUCT	QTY. TRAMP	QTY. NOT	QTY. SOLIDS	PRODUCT QTY.
NAME, NUMBER	FLUID REMOVED	RUN	REMOVED	AFTER NEW MIX
For West 3500	15 gal	20 gal	2 cups	500 gal

20 gals not run due to pump sucking air

QUALITY CONTROL STANDARDS, STATUS:

	STANDARD	DIRTY	RECYCLED	MAKE-UP
pH	9.1	7.8	9.0	9.9
Refrac Reading	2.2	3.0	2.6	3.0
Mix Ratio	20:1	15:1	18:1	15:1
Color	Green	Green	Green	Green
Odor	Scented	L Transidity	None	None
Other				

ADDITIONAL COMMENTS: Note: recycled 25 gals of Coolant + coolant  
and got a Refrac Reading of 1.6 (2500) before adding  
transferers S-500 to Dirty Tank

CUSTOMER SIGNATURE

CUSTOMER



fluid  
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1717 Newport Ave  
Santa Ana, California 92705  
714-754-7220

WORK ORDER  
**No. 2802**

DATE 11-17-87

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1717 NEWPORT AVE  
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SANTA ANA, CA 92705

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CHIME

ACCOUNT NO.	NEW <input type="checkbox"/> EXISTING <input checked="" type="checkbox"/>	MACH. # <u>51-01</u>	OPER. #	NAME <u>RICH HANDEL</u> <u>KURT GALT-SKI</u>	CUST. P.O. #	SCH. DATE <u>11-17-87</u>	AUTH.
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**RECYCLING SERVICE**

300	COOLANT	<u>875</u>
300	HYDRAULIC OIL	
300	CUTTING OIL	
300	EDM FLUID	
300	QUENCHING FLUID	
300	OILY WATER	
	OTHER	

TIME IN 7:00 am/pm  
Gals. TIME OUT am/pm

#1 ADDED .15% BIOCIDES  
ADDED 75 GAL WATER  
ADJUST MIX RATIO  
#2 ADDED .15% BIOCIDES  
NO MAKE-UP NEEDED

**OTHER SERVICES**

301	COOLANT	
	CONDITIONER	<u>1</u>
	MACHINE CLEANER	
315	SET-UP	
	OTHER PRODUCTS	
	OTHER SERVICES	

Gals.

Hours

**COMMENTS**

PRODUCT	QTY. TRAMP	QTY. NOT	QTY. SOLIDS	PRODUCT QTY.
NAME, NUMBER	FLUID REMOVED	RUN	REMOVED	AFTER NEW MIX
<u>FARWEST 3500</u>	<u>11 gal</u>	<u>110</u> <u>gal</u>	<u>2.4 CUPS</u>	<u>480</u> <u>470</u> <u>gal</u>

ROOM LEFT IN CLEAN TANK TO ADJUST MIX RATIO LOSS OF SUCTION

QUALITY CONTROL STANDARDS, STATUS:

RUN TEMP: 158-164

	STANDARD	DIRTY #2	RECYCLED	#1 MAKE-UP
pH	9.4	6.4 2.6	6.0 7.6	8.2
Refrac Reading	2.2	3.0 2.0	3.0 2.2	2.2
Mix Ratio	20:1	15:1 23:1	15:1 20:1	20:1
Color	GREEN	GREEN GREEN	GREEN GREEN	GREEN
Odor	NONE	RANCID NONE	NONE NONE	NONE
Other				

ADDITIONAL COMMENTS: PUMPED 480 GALS DIRTY COOLANT FROM "OLD" DIRTY TANK  
"NEW" DIRTY TANK: ADDED DYE AND WINTERGREEN SCENT TO BOTH  
TANKS

CUSTOMER SIGNATURE

CUSTOMER



fluid  
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1717 Newport Ave  
Santa Ana, California 92705  
714-754-7220

WORK ORDER  
No. 2767

DATE 10/2/77

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Allen Aircraft  
11643 Vanowen St  
N Hollywood Ca 91607

ACCOUNT NO.	NEW <input type="checkbox"/> EXISTING <input checked="" type="checkbox"/>	MACH. # 1-06	OPER. #	NAME Pete Maglio	CUST. P.O. #	SCH. DATE	AUTH.
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### RECYCLING SERVICE

300 COOLANT  
300 HYDRAULIC OIL  
300 CUTTING OIL  
300 EDM FLUID  
300 QUENCHING FLUID  
300 OILY WATER  
OTHER

TIME IN 2:45 am  
Gals. TIME OUT 3:45 am

### OTHER SERVICES

301 COOLANT  
CONDITIONER  
MACHINE CLEANER  
315 SET-UP  
OTHER PRODUCTS  
OTHER SERVICES

### COMMENTS

PRODUCT	QTY. TRAMP	QTY. NOT	QTY. SOLIDS	PRODUCT QTY.
NAME, NUMBER	FLUID REMOVED	RUN	REMOVED	AFTER NEW MIX
	gal	gal		gal

### QUALITY CONTROL STANDARDS, STATUS:

	Hangsterfers STANDARD	Far West	RECYCLED	MAKEUP
pH	9.0	9.1	8.7	8.7
Refrac Reading	5.4	2.2	3.0	3.0
Mix Ratio	20:1	20:1	15:1	15:1
Color	White	Green	Green	Green
Odor	Scented	Minty	Minty	Minty
Other				

ADDITIONAL COMMENTS: added scent 1 3/4 pts to Hangsterfers 100 gal tank  
added 1 pt to Hangsterfers 500 gal tank & Far West 500 gal tank  
Tank #2, Added 3/4 pt to Far West tank #1

CUSTOMER SIGNATURE

CUSTOMER



fluid  
recycling  
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1717 Newport Blvd  
Santa Ana, California 92705  
714-754-7220

WORK ORDER

No. 2763

DATE 10/16/87

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Allan Aircraft Supply  
11643 Vanowen ST  
N Hollywood Ca. 91605

ACCOUNT NO.	NEW <input type="checkbox"/> EXISTING <input checked="" type="checkbox"/>	MACH. #	OPER. #	NAME	CUST. P.O. #	SCH. DATE	AUTH.
		SI-06		Pete Manlio		10/16/87	

RECYCLING SERVICE

300	COOLANT	oil Tank #1 Tank #2
300	HYDRAULIC OIL	
300	CUTTING OIL	
300	EDM FLUID	
300	QUENCHING FLUID	
300	OILY WATER	
	OTHER	

TIME IN 7:30 am/pm  
TIME OUT 4:10 am/pm

OTHER SERVICES

301	COOLANT	
	CONDITIONER	
	MACHINE CLEANER	
315	SET-UP	
	OTHER PRODUCTS	
	OTHER SERVICES	

Gals. added 6 pnts to each Tank (15%)  
Hours added 7 gals coolant Tank #1  
added 9 gals coolant Tank #2

COMMENTS

PRODUCT	QTY. TRAMP	QTY. NOT	QTY. SOLIDS	PRODUCT QTY.
NAME, NUMBER	FLUID REMOVED	RUN	REMOVED	AFTER NEW MIX
Far West 3500	20 gal	64 gal	3 cups	487 gal

32 gals in each tank not run due to pump sucking air

QUALITY CONTROL STANDARDS, STATUS:

RUN TEMP: 156°

	STANDARD	DIRTY	#1 RECYCLED	#2 MAKE-UP
pH	9.0	6.8 6.5	6.9 6.3	8.5 8.4
Refrac Reading	2.2	2.0 1.8	1.8 1.6	2.8 2.5
Mix Ratio	20:1	23:1 25:1	25:1 28:1	17:1 17:1
Color	Green	Blue Blue	Blue Blue	Blue Blue
Odor	Scented	Heavy rancidity	None	None None
Other				

ADDITIONAL COMMENTS:

CUSTOMER SIGNATURE

CUSTOMER



fluid  
recycling  
services,  
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1717 Newpage  
Santa Ana, California 92705  
714-754-7220

WORK ORDER  
No. 2593

DATE \_\_\_\_\_

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ACCOUNT NO.	NEW <input type="checkbox"/> EXISTING <input checked="" type="checkbox"/>	MACH. #	OPER. #	NAME	CUST. P.O. #	SCH. DATE	AUTH.
		51-01		Jim McGill		12-10	

RECYCLING SERVICE

300 COOLANT 280  
300 HYDRAULIC OIL  
300 CUTTING OIL  
300 EDM FLUID  
300 QUENCHING FLUID  
300 OILY WATER  
OTHER

TIME IN 8:00 am/pm  
Gals. TIME OUT \_\_\_\_\_ am/pm

OTHER SERVICES

301 COOLANT  
CONDITIONER \_\_\_\_\_ Gals.  
MACHINE CLEANER \_\_\_\_\_  
315 SET-UP \_\_\_\_\_ Hours  
OTHER PRODUCTS \_\_\_\_\_  
OTHER SERVICES PUMPED 350 GAL COOLANT FROM DRUMS

COMMENTS

PRODUCT	QTY. TRAMP	QTY. NOT	QTY. SOLIDS	PRODUCT QTY.
NAME, NUMBER	FLUID REMOVED	RUN	REMOVED	AFTER NEW MIX
<u>HANSEN 500S-500</u>	<u>gal</u>	<u>gal</u>		<u>X gal</u>

QUALITY CONTROL STANDARDS, STATUS:

RUN TEMP: 160°-165°

	STANDARD	DIRTY	RECYCLED	MAKE-UP
pH	<u>8.4</u>	<u>7.0</u>	<u>7.2</u>	
Refrac Reading	<u>5</u>	<u>2</u>	<u>3</u>	
Mix Ratio	<u>60:1</u>	<u>40:1</u>	<u>40:1</u>	
Color	<u>WHITE</u>	<u>GREEN</u>	<u>WHITE</u>	
Odor	<u>NONE</u>	<u>RAVIA</u>	<u>NONE</u>	
Other				

ADDITIONAL COMMENTS: ADDED RINCINE .15% ADJUSTED MIX RATIO  
REMOVED COOLANT TO 350 GALLONS  
OF CONCENTRATE REMOVED TO ADJUST TO 20:1

CUSTOMER SIGNATURE

CUSTOMER





fluid  
recycling  
services,  
inc.

1717 Newport  
Santa Ana, California 92705  
714-754-7220

WORK ORDER  
No. 2728

DATE 7-2-87

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ACCOUNT NO.	NEW <input type="checkbox"/> EXISTING <input checked="" type="checkbox"/>	MACH. # <u>51-06</u>	OPER. #	NAME <u>12 + 17491.0</u>	CUST. P.O. #	SCH. DATE <u>7/2/87</u>	AUTH.
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RECYCLING SERVICE

300 COOLANT 465  
300 HYDRAULIC OIL  
300 CUTTING OIL  
300 EDM FLUID  
300 QUENCHING FLUID  
300 OILY WATER  
OTHER

TIME IN 7:45 am/pm  
Gals. TIME OUT 5:15 am/pm  
Upon arrival moved 1100 gal Tank, pumped out 16 gals of coolant and cleaner inside of 1100 gal Tank  
Pumped 484 gals of coolant out of drum into Dirty Tank.

OTHER SERVICES

301 COOLANT  
CONDITIONER 1  
MACHINE CLEANER  
315 SET-UP  
OTHER PRODUCTS  
OTHER SERVICES

Gals. added 10 gals of coolant concentrate with 10 gal of water  
Hours added 2 pts Biocide @ 10%

COMMENTS

PRODUCT	QTY. TRAMP	QTY. NOT	QTY. SOLIDS	PRODUCT QTY.
NAME, NUMBER	FLUID REMOVED	RUN	REMOVED	AFTER NEW MIX
Hangsterfers S-500	15 gal	15 gal	6 cups	475 gal

15 gals not run due to pump sucking air

QUALITY CONTROL STANDARDS, STATUS:

RUN TEMP: 165°

	STANDARD	DIRTY	RECYCLED	MAKE-UP
pH	9.0	8.5	8.6	9.1
Refrac Reading	5.4	3.0	2.4	6.0
Mix Ratio	20:1	30:1	33:1	18:1
Color	white	Tan	white	white
Odor	Scented	Ltrancidity	None	None
Other				

ADDITIONAL COMMENTS:

CUSTOMER SIGNATURE

CUSTOMER

fluid  
recycling  
services,  
inc.

1717 Newport Blvd.  
Santa Ana, California 92705  
714-754-7220

WORK ORDER  
No. 2729

DATE 9/27/87

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Allen Av Craft  
11643 Vanowen ST.  
N. Hollywood Ca 91604

ACCOUNT NO.	NEW <input type="checkbox"/> EXISTING <input checked="" type="checkbox"/>	MACH. # 51-06	OPER. #	NAME Pete Maglio	CUST. P.O. #	SCH. DATE 9/27/87	AUTH.
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RECYCLING SERVICE

300 COOLANT 480  
300 HYDRAULIC OIL  
300 CUTTING OIL  
300 EDM FLUID  
300 QUENCHING FLUID  
300 OILY WATER  
OTHER

TIME IN 7:45 am/pm  
Gals. TIME OUT 5:15 am/pm

After recycling the fluid  
480 gals, pumped 480  
gals of ~~coolant~~  
coolant out of drums  
into dirty tank.

OTHER SERVICES

301 COOLANT  
CONDITIONER Gals.  
MACHINE CLEANER  
315 SET-UP Hours  
OTHER PRODUCTS  
OTHER SERVICES

COMMENTS

PRODUCT	QTY. TRAMP	QTY. NOT	QTY. SOLIDS	PRODUCT QTY.
NAME, NUMBER	FLUID REMOVED	RUN	REMOVED	AFTER NEW MIX
Hangsterfers 5-500	15 gal	15 gal	7 cups	gal
15 gals not run due to pump sucking air				

QUALITY CONTROL STANDARDS, STATUS:

RUN TEMP: 168°

	STANDARD	DIRTY	RECYCLED	MAKE-UP
pH	9.0	6.8	7.2	
Refrac Reading	5.4	0.4	0.2	
Mix Ratio	20:1	80:1	100:1	
Color	White	Brown	Tan	
Odor	Scented	Heavy rancidity	None	
Other				

ADDITIONAL COMMENTS:

CUSTOMER SIGNATURE

CUSTOMER



fluid  
recycling  
services,  
inc.

1717 Newport Blvd  
Santa Ana, California 92705  
714-754-7220

WORK ORDER

No. 2620

DATE 8/13/87

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Allen [unclear] [unclear]  
11643 Vanowen ST  
N. Hollywood Ca 91619

ACCOUNT NO.	NEW <input type="checkbox"/> EXISTING <input checked="" type="checkbox"/>	MACH. # 51-03	OPER. #	NAME Pete Marino	CUST. P.O. #	SCH. DATE 8/13/87	AUTH.
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RECYCLING SERVICE

300 COOLANT 1065  
300 HYDRAULIC OIL  
300 CUTTING OIL  
300 EDM FLUID  
300 QUENCHING FLUID  
300 OILY WATER  
OTHER

TIME IN 7:30 am/pm  
Gals. TIME OUT 5:15 am/pm  
8/13/87  
9:00 AM TO  
3:00 PM

OTHER SERVICES

301 COOLANT  
CONDITIONER  
MACHINE CLEANER  
315 SET-UP  
OTHER PRODUCTS  
OTHER SERVICES

Gals. added 12 lbs Biocide  
(15470)  
Hours added 28 gals coolant  
concentrate  
added dye

COMMENTS

PRODUCT NAME, NUMBER	QTY. TRAMP FLUID REMOVED	QTY. NOT RUN	QTY. SOLIDS REMOVED	PRODUCT QTY. AFTER NEW MIX
For West 3500	15 gal	20 gal	4 cups	gal

QUALITY CONTROL STANDARDS, STATUS: RUN TEMP: 168°

	STANDARD	DIRTY	RECYCLED	MAKE-UP
pH	9.0	6.6	6.8	8.4
Refrac Reading	2.2	1.4	1.0	2.2
Mix Ratio	20:1	30:1	40:1	18:1
Color	Green	Tan	Tan	Green
Odor	Scented	Heavy Rancidity	None	None
Other				

ADDITIONAL COMMENTS:

CUSTOMER SIGNATURE

SALESMAN



fluid  
recycling  
services,  
inc.

1717 Newpa de  
Santa Ana, California 92705  
714-754-7220

WORK ORDER  
No. 2468

DATE 6-2-87

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1717 NEWPA DE  
515 VANOWEN ST  
12 HOLLYWOOD, CA 91607

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ACCOUNT NO.	NEW <input type="checkbox"/> EXISTING <input checked="" type="checkbox"/>	MACH. #	OPER. #	NAME	CUST. P.O. #	SCH. DATE	AUTH.
		51-01		RICH HAMEL		6-2-87	

### RECYCLING SERVICE

300 COOLANT 270 Gals.  
300 HYDRAULIC OIL  
300 CUTTING OIL  
300 EDM FLUID  
300 QUENCHING FLUID  
300 OILY WATER  
OTHER

TIME IN 8:45 am/pm

TIME OUT am/pm

### OTHER SERVICES

301 COOLANT  
CONDITIONER Gals.  
MACHINE CLEANER  
315 SET-UP Hours  
OTHER PRODUCTS  
OTHER SERVICES

### COMMENTS

PRODUCT NAME, NUMBER	QTY. TRAMP FLUID REMOVED	QTY. NOT RUN	QTY. SOLIDS REMOVED	PRODUCT QTY. AFTER NEW MIX
FARWEST 3500	4 gal	1040 gal	1.8 cup	X gal

1 CLEAN TANK FULL

### QUALITY CONTROL STANDARDS, STATUS:

RUN TEMP: 165-170

	STANDARD	DIRTY	RECYCLED	MAKE-UP
pH	7.0	6.4	6.3	8.2
Refrac Reading	1.6	1.0	1.0	1.2
Mix Ratio	20:1	25:1	25:1	23:1
Color	BLUE	GRAY	GRAY-GREEN	GREEN
Odor	NONE	NONE	NONE	NONE
Other				

### ADDITIONAL COMMENTS:

CUSTOMER SIGNATURE

CUSTOMER

6-2-87



fluid  
recycling  
services,  
inc.

1717 Newport Circle  
Santa Ana, California 92705  
714-754-7220

WORK ORDER  
No. 2461

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ACCOUNT NO.	NEW <input type="checkbox"/> EXISTING <input checked="" type="checkbox"/>	MACH. #	OPER. #	NAME	CUST. P.O. #	SCH. DATE	AUTH.
		51-01		RICH HOMER		5-29-87	

### RECYCLING SERVICE

300 COOLANT 255 Gals.

300 HYDRAULIC OIL \_\_\_\_\_

TIME IN 12:05 am/pm

300 CUTTING OIL \_\_\_\_\_

TIME OUT \_\_\_\_\_ am/pm

300 EDM FLUID \_\_\_\_\_

300 QUENCHING FLUID \_\_\_\_\_

300 OILY WATER \_\_\_\_\_

OTHER \_\_\_\_\_

### OTHER SERVICES

301 COOLANT  
CONDITIONER 1 Gals.

MACHINE CLEANER \_\_\_\_\_

315 SET-UP \_\_\_\_\_ Hours

OTHER PRODUCTS \_\_\_\_\_

OTHER SERVICES \_\_\_\_\_

### COMMENTS

PRODUCT	QTY. TRAMP	QTY. NOT	QTY. SOLIDS	PRODUCT QTY.
NAME, NUMBER	FLUID REMOVED	RUN	REMOVED	AFTER NEW MIX
FAR WEST	3 gal	① 600 gal	.8 CUPS	X gal

① PLANT CLOSING AT 4:00

QUALITY CONTROL STANDARDS, STATUS:

RUN TEMP:

	STANDARD	DIRTY	RECYCLED	MAKE-UP
pH	9.5	6.6	6.7	
Refrac Reading	1.8	<del>1.6</del>	1.4	
Mix Ratio	20:1	23:1	22:1	
Color	GREEN	GRAY	GRAY-GREEN	
Odor	NONE	LIGHT-KRALETTY	NONE	
Other				

ADDITIONAL COMMENTS: ADDED 15% GROUTAN

CUSTOMER SIGNATURE

CUSTOMER



fluid  
recycling  
services,  
inc.

1717 Newport Circle  
Santa Ana, California 92705  
714-754-7220

WORK ORDER

No. 2307

DATE 7-11-77

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Atlas Aircraft Supply Co.  
11643 Vanowen ST  
North Hollywood, Cal. 91609

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ACCOUNT NO.	NEW <input type="checkbox"/> EXISTING <input checked="" type="checkbox"/>	MACH. #	OPER. #	NAME	CUST. P.O. #	SCH. DATE	AUTH.
		<u>SI-03</u>		<u>Pete Maglio</u>	<u>43197</u>	<u>7/11/77</u>	

**RECYCLING SERVICE**

300 COOLANT 1.50 Gals.  
300 HYDRAULIC OIL \_\_\_\_\_  
300 CUTTING OIL \_\_\_\_\_  
300 EDM FLUID \_\_\_\_\_  
300 QUENCHING FLUID \_\_\_\_\_  
300 OILY WATER \_\_\_\_\_  
OTHER \_\_\_\_\_

TIME IN 7:15 am/pm  
TIME OUT 4:00 am/pm

**OTHER SERVICES**

301 COOLANT \_\_\_\_\_  
CONDITIONER 1 Gals.  
MACHINE CLEANER \_\_\_\_\_  
315 SET-UP \_\_\_\_\_ Hours  
OTHER PRODUCTS \_\_\_\_\_  
OTHER SERVICES \_\_\_\_\_

added 15% to 500  
Sample bottles  
not available to  
follow #4 prob.  
procedure.

**COMMENTS**

PRODUCT	QTY. TRAMP	QTY. NOT	QTY. SOLIDS	PRODUCT QTY.
NAME, NUMBER	FLUID REMOVED	RUN	REMOVED	AFTER NEW MIX
<u>Far West</u>	<u>15 gal</u>	<u>45 gal</u>	<u>6.4 cups</u>	<u>gal</u>

45 gal not run due to pump cavitation + machine priming

QUALITY CONTROL STANDARDS, STATUS: RUN TEMP: 170° F

	STANDARD	DIRTY	RECYCLED	MAKE-UP
pH	<u>9.4</u>	<u>7.9</u>	<u>8.1</u>	
Refrac Reading	<u>2.0</u>	<u>2.0</u>	<u>1.8</u>	
Mix Ratio	<u>20:1</u>	<u>20:1</u>	<u>22:1</u>	
Color	<u>Blue</u>	<u>Green</u>	<u>Green</u>	
Odor	<u>0</u>			
Other				

ADDITIONAL COMMENTS: Advise plant to add 5 gal of coolant  
conc. To adjust mix ratio to 20:1; and replenish  
ingredients.

CUSTOMER SIGNATURE

CUSTOMER



fluid  
recycling  
services,  
inc.

1717 Newpo. Circle  
Santa Ana, California 92705  
714-754-7220

WORK ORDER  
No. 2247

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**RECYCLING SERVICE**

300 COOLANT 909 Gals.  
300 HYDRAULIC OIL \_\_\_\_\_  
300 CUTTING OIL \_\_\_\_\_  
300 EDM FLUID \_\_\_\_\_  
300 QUENCHING FLUID \_\_\_\_\_  
300 OILY WATER \_\_\_\_\_  
OTHER \_\_\_\_\_

TIME IN 10 am/pm

TIME OUT 2:00 am/pm

**OTHER SERVICES**

301 COOLANT \_\_\_\_\_  
CONDITIONER 1 Gals.  
MACHINE CLEANER \_\_\_\_\_  
315 SET-UP \_\_\_\_\_ Hours  
OTHER PRODUCTS \_\_\_\_\_  
OTHER SERVICES \_\_\_\_\_

**COMMENTS**

PRODUCT NAME, NUMBER	QTY. TRAMP FLUID REMOVED	QTY. NOT RUN	QTY. SOLIDS REMOVED	PRODUCT QTY. AFTER NEW MIX
FAR WEST	6 gal	91 gal	1.2 cups	X gal

QUALITY CONTROL STANDARDS, STATUS:

RUN TEMP: AVE 160°

	STANDARD	DIRTY	RECYCLED	MAKE-UP
pH	9.0	7.0	7.5	
Refrac Reading	2.0	2.2	2.2	
Mix Ratio	20:1	19:1	19:1	
Color	TRANS GREEN	GREEN	GREEN	
Odor	NONE	RANCID	NONE	
Other				

ADDITIONAL COMMENTS:

ADDED BIOCEIDE .15%

CUSTOMER SIGNATURE

CUSTOMER

# MATERIAL SAFETY DATA SHEET

The purpose of this data sheet is to obtain technical information for each specific material from the manufacturer. This information is required to evaluate health, safety and environmental hazards, determine precautions and make final recommendations for use of the material. The information requested will be kept confidential and disclosed only as necessary to meet requirements of the Occupational Safety and Health Act of 1970 or as required by any other Federal, State or Local regulations.

3/1/86

RECEIVED  
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ALLAN AIRPORT

MARCH 1986

SECTION I	
MANUFACTURER'S NAME <b>METALUBE CORPORATION</b>	EMERGENCY TELEPHONE NO. <b>714/545-0822</b>
ADDRESS (Number, Street, City, State, and ZIP Code) <b>7132-B GARDEN GROVE BLVD., WESTMINSTER, CA 92683</b>	
CHEMICAL NAME AND SYNONYMS <b>NON-HAZARDOUS COMPOUND</b>	
TRADE NAME AND SYNONYMS <b>EVERCLEAN BLUE GOLD</b>	
CHEMICAL FAMILY <b>STRONGLY BASIC SOLUTION</b>	FORMULA <b>PROPRIETARY</b>

SECTION II - HAZARDOUS INGREDIENTS					
PAINTS, PRESERVATIVES & SOLVENTS	%	TLV (Units)		%	TLV (Units)
Pigments		NA	Base Metal		NA
Catalyst		NA	Alloys		NA
Vehicle		NA	Metallic Coatings		NA
Solvents	N O N E	NA	Filler Metal Plus Coating or Core Flux		NA
Additives		NA	Others		
Others					
HAZARDOUS MIXTURES OF OTHER SOLVENTS				%	TLV (Units)
A MSDS IS REQUIRED ONLY FOR HAZARDOUS MATERIALS. THIS IS SUBMITTED TO ASSURE THE ABSENCE OF HAZARDOUS INGREDIENTS IN THE FORMULATION OF THIS PRODUCT.					
TOXICITY REPORTS AVAILABLE UPON REQUEST.					

SECTION III - PHYSICAL DATA			
Boiling Point (°F)	208	Specific Gravity (H <sub>2</sub> O = 1)	1.07
Vapor Pressure (mm Hg.)	Undet.	Percent Volatile by Volume (%)	87
Vapor Density (Air = 1)	Undet.	Evaporation Rate (_____ = 1)	Undet.
Solubility in Water	Complete		
Appearance and Odor <b>BLUE LIQUID, PEPPERMINT ODOR</b>			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA							
Flash Point (Method used)	NONE	Not Flammable Flammable Limits	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">LEL</td> <td style="width: 50%;">UEL</td> </tr> <tr> <td>NA</td> <td>NA</td> </tr> </table>	LEL	UEL	NA	NA
LEL	UEL						
NA	NA						
Extinguishing Media	NONE						
Special Fire Fighting Procedures	NONE						
Unusual Fire and Explosion Hazards     NONE							



## SECTION V - HEALTH HAZARD DATA

Threshold Limit Value

NA

Effects of Overexposure None when used in diluted form as directed. Concentrated solution may cause skin chafing if hypersensitive.

Emergency and First Aid Procedures Material is alkaline. Ingestion: Do not induce vomiting.

Administer mildly acidic substance such as egg white. Inhalation: Expose to fresh air. Skin contact: Wash with water. Eye contact: Flush with copious amount of water. See physician.

## SECTION VI - REACTIVITY DATA

Stability	Unstable		Conditions to Avoid
	Stable	X	
Incompatibility (Materials to avoid)		NONE KNOWN	
Hazardous Decomposition Products		NONE KNOWN	
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

## SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled

Dilute with water and clean up.

Waste Disposal Method Uncontaminated solution may be diluted with sufficient amounts of water and flush to sewer. Contaminated solution: Refer and follow applicable local, state and federal regulations.

## SECTION VIII - SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify type) NA

Ventilation	Local Exhaust	Acceptable	Special
	Mechanical (General)		Other
Protective Gloves	Yes, Especially if hypersensitivity is suspected.	Eye Protection	Goggles
Other Protective Equipment			

## SECTION IX - SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing Material can be stored outside

Other Precautions None

Material is freezable

Judgements as to the suitability of information herein for the purchaser's purposes are necessarily the purchaser's responsibility. Reasonable care has been taken in the preparation of this information, but METALUBE CORPORATION, extends no warranties, makes no representations and assumes no responsibility as to the accuracy or suitability of this information for any purchaser's use or for any consequence of its use.

# MATERIAL SAFETY DATA SHEET

## CASTROL INDUSTRIAL WEST INC.

09/11/90

5511 DISTRICT BOULEVARD, LOS ANGELES, CALIFORNIA 90040  
PHONE (213) 771 - 7000

## SECTION I

## TRADE NAME

PRODUCT NAME:  
HAZARD CLASS:

CASTROL HYSPIN R &amp; O OIL 220

## SECTION II

## HAZARDOUS INGREDIENTS

OTHER THAN THE INGREDIENTS LISTED TO THE RIGHT, THIS PRODUCT CONTAINS NO OTHER INGREDIENTS NOW KNOWN TO BE HAZARDOUS AS DEFINED IN OSHA 29 CFR 1910.1000 (SUB-PART Z), OSHA 29 CFR 1910.1200, AND THE CALIFORNIA GENERAL INDUSTRY SAFETY ORDER 5194.

INGREDIENTS	CAS NO.	PERCENT RANGE	HAZARD DATA
SEVERELY SOLVENT TREATED OIL	64742-65-0	30-50	TLV=5MG/M3
SEVERELY SOLVENT TREATED OIL	64742-57-0	50-70	TLV=5MG/M3

## SECTION III

## PHYSICAL DATA

BOILING POINT(DEGREES F): +500 F

MELTING POINT: UNKNOWN

SPECIFIC GRAVITY(H2O=1): 0.89

VAPOR PRESSURE(MMHG): NEGLIGIBLE AT ROOM TEMP.

VAPOR DENSITY(AIR=1): UNKNOWN

SOLUBILITY IN H2O, % BY WT. INSOLUBLE

% VOLATILES BY VOLUME: NEGLIGIBLE

EVAPORATION RATE(BUTYL ACETATE=1): NEGLIGIBLE

PH: N/A

APPEARANCE AND ODOR: AMBER, SLIGHT OILY ODOR

## SECTION IV

## FIRE AND EXPLOSION DATA

FLASH POINT (COC): 425 F

FIRE POINT (COC): -

FLAMMABLE LIMITS IN AIR % BY VOLUME:

LOWER - UNKNOWN

UPPER - UNKNOWN

EXTINGUISHING MEDIA: CO2, FORM, DRY CHEMICAL

SPECIAL FIRE FIGHTING PROCEDURES: TREAT AS MINERAL OIL FIRE

UNUSUAL FIRE AND EXPLOSION HAZARD: NONE

## SECTION V

## HEALTH HAZARD INFORMATION

INGREDIENTS LISTED AS CARCINOGENS BY NTP, IARC, OR OSHA: NONE.

ROUTES OF EXPOSURE AND EFFECTS OF OVEREXPOSURE

INHALATION: TLV FOR PRODUCT NOT ESTABLISHED. REFER TO HAZARDOUS MATERIALS LIST FOR INGREDIENT TLV'S. PRODUCT NOT EXPECTED TO CAUSE RESPIRATORY TRACT IRRITATION.

SKIN CONTACT: CONTINUED CONTACT MAY CAUSE IRRITATION.

SKIN ABSORPTION: SKIN ABSORPTION IS NOT EXPECT TO OCCUR.

EYE CONTACT: WILL CAUSE EYE IRRITATION.

INGESTION: ORAL LD50 FOR THIS PRODUCT HAS NOT BEEN ESTABLISHED; DO NOT INGEST.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE TO PRODUCT? NONE KNOWN.

EMERGENCY AND FIRST AID PROCEDURES

EYES: FLUSH EYES WITH WATER FOR 15 MINUTES; CONSULT A PHYSICIAN.

SKIN: WASH EXPOSED AREAS WITH SOAP AND WATER.

INHALATION: IF IRRITATION OCCURS, REMOVE TO FRESH AIR AREA AND AVOID FURTHER INHALATION

INGESTION: CONSULT A PHYSICIAN. DO NOT INDUCE VOMITING.

PAGE 2

CASTROL HYPIN R &amp; O OIL 220

## SECTION VI

## REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY: NONE. PRODUCT IS STABLE UNDER NORMAL CONDITIONS.  
INCOMPATIBILITY: STRONG OXIDIZERS  
HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: THIS PRODUCT WILL NOT POLYMERIZE.

## SECTION VII

## SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN FOR PRODUCT  
SPILLS AND DISPOSAL

RECOVER FREE LIQUID. KEEP PETROLEUM PRODUCTS OUT OF STREAMS AND WATERWAYS BY DIKING OR IMPOUNDING. ADVISE AUTHORITIES IF PRODUCT HAS ENTERED OR MAY ENTER SEWERS, WATERCOURSES OR EXTENSIVE LAND AREAS. ADD ABSORBENT TO SPILL & VENTILATE ENCLOSED AREAS. INCINERATE ABSORBED MATERIAL. DISPOSE OF FREE LIQUID BY INCINERATION OR THROUGH AN OIL RECLAIM SERVICE.

## SECTION VIII

## SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS: IF MISTING OCCURS, PROVIDE LOCAL VENTILATION.  
SPECIFIC PERSONAL RESPIRATORY EQUIPMENT: IF EXCESSIVE MISTING OCCURS, OR IF ASSOCIATED TLD IS EXCEEDED, PROVIDE NIOSH APPROVED RESPIRATORY EQUIPMENT WITH TC-21C-XXX CARTRIDGE COMBINATION  
  
EYES: FACE SHIELD OR GOGGLES.  
GLOVES: IMPERVIOUS IF DESIRED.  
OTHER CLOTHING AND EQUIPMENT: NONE REQUIRED.  
  
PROTECTIVE MEASURES FOR REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT: WEAR GLOVES AND PROTECTIVE EYEWEAR AT ALL TIMES DURING EQUIPMENT DECONTAMINATION OR REPAIR.

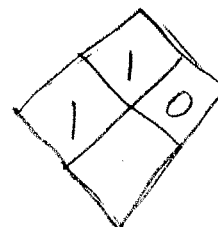
## SECTION IX

## SPECIAL PRECAUTIONS

AVOID CONTACT WITH EYES AND BREATHING MISTS. WASH CONTAMINATED CLOTHING BEFORE REUSE.  
DO NOT TAKE INTERNALLY. KEEP DRUMS CLOSED WHEN NOT IN USE.

PREPARED BY: A.LUM

DATE: OCT. 01, 1988



U.S. DEPARTMENT OF LABOR  
Occupational Safety and Health Administration

Form Approved  
OMB No. 44-R1387

# MATERIAL SAFETY DATA SHEET

Required under USDOL Safety and Health Regulations for Ship Repairing,  
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

## SECTION I

MANUFACTURER'S NAME <b>Stimmes-Western Chemical Corporation</b>		EMERGENCY TELEPHONE NO. <b>(213) 269-0191</b>
ADDRESS (Number, Street, City, State, and ZIP Code) <b>3270 E. Washington Blvd Los Angeles, CA. 90023</b>		
CHEMICAL NAME AND SYNONYMS <b>1,1,1 Trichloroethane; Methylchloroform</b>		TRADE NAME AND SYNONYMS <b>VYTHENE PC (new)</b>
CHEMICAL FAMILY <b>Halogenated Hydrocarbons</b>		FORMULA <b>N/A</b>

## SECTION II HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS	100	350	FILLER METAL		
ADDITIVES			PLUS COATING OR CORE FLUX		
OTHERS			OTHERS		
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

## SECTION III PHYSICAL DATA

BOILING POINT (°F.)	165.6	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	1.31
VAPOR PRESSURE (mm Hg.)	120	PERCENT VOLATILE BY VOLUME (%)	100
VAPOR DENSITY (AIR=1)	4.34	EVAPORATION RATE (ethyl ether=1)	0.35
SOLUBILITY IN WATER	negligible	Molecular Weight	132
APPEARANCE AND ODOR	clear, colorless liquid; ether-like odor		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) <b>None (tag, open or closed)</b>	FLAMMABLE LIMITS	Cal	Uel
EXTINGUISHING MEDIA <b>Water, dry chemical or carbon dioxide</b>			
SPECIAL FIRE FIGHTING PROCEDURES <b>Wear pressure-demand self-contained breathing apparatus for possible exposure to hydrogen chloride and phosgene.</b>			
UNUSUAL FIRE AND EXPLOSION HAZARDS <b>Vapors can be ignited by high intensity source of ignition. Can decompose or burn to form hydrogen chloride and traces of phosgene.</b>			

## SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	350 ppm - 8-hour (OSHA--29 CFR 1910.1000)
EFFECTS OF OVEREXPOSURE	Loss of coordination and equilibrium to actual unconsciousness, and even death, in unventilated areas such as tanks.
EMERGENCY AND FIRST AID PROCEDURES	Move to fresh air, use artificial respiration if breathing has stopped. Administer oxygen after breathing has been restored. (NEVER ADMINISTER ADRENALIN!) Call physician (he should not administer adrenalin).

## SECTION VI - REACTIVITY DATA

STABILITY	<input type="checkbox"/> UNSTABLE <input checked="" type="checkbox"/> STABLE	CONDITIONS TO AVOID Avoid open flames, hot glowing surfaces and electric arcs.
INCOMPATIBILITY (Materials to avoid)	Avoid mixing with caustic soda, caustic potash or oxidizing materials.	
HAZARDOUS DECOMPOSITION PRODUCTS	HCl and possible traces of phosgene.	
HAZARDOUS POLYMERIZATION	MAY OCCUR	CONDITIONS TO AVOID
	WILL NOT OCCUR	

## SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	Immediately evacuate area and provide maximum ventilation. Only personnel equipped with proper respiratory and skin/eye protection should be allowed in area. Collect spilled material on sawdust or vermiculite and sweep into closed containers for disposal. Then flush area with plenty of water and maintain ventilation until vapors are eliminated.
WASTE DISPOSAL METHOD	EPA approved incineration or contact local waste disposal contractor.

## SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)		
Fresh air masks.		
VENTILATION	LOCAL EXHAUST MECHANICAL (Maintain sufficient flow to maintain workplace concentration below TLV)	SPECIAL OTHER
PROTECTIVE GLOVES: polyethylene, neoprene or polyvinyl alcohol		
EYE PROTECTION: Splash-proof glasses or goggles		
OTHER PROTECTIVE EQUIPMENT: Neoprene apron, safety shoes, eye-wash fountain.		

## SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE	Store in cool well-ventilated place. When opening--remove bung SLOWLY.
OTHER PRECAUTIONS	Do not breathe fumes. Wear protective clothing.

# MATERIAL SAFETY DATA SHEET

## CASTROL INDUSTRIAL WEST INC.

09/11/90

5511 DISTRICT BOULEVARD, LOS ANGELES, CALIFORNIA 90048  
PHONE (213) 771 - 7000

## SECTION I

## TRADE NAME

PRODUCT NAME: CASTROL HYPIN AW 68 OIL  
HAZARD CLASS:

## SECTION II

## HAZARDOUS INGREDIENTS

OTHER THAN THE INGREDIENTS LISTED TO THE RIGHT, THIS PRODUCT CONTAINS NO OTHER INGREDIENTS NOW KNOWN TO BE HAZARDOUS AS DEFINED IN OSHA 29 CFR 1910.1000 (SUB-PART Z), OSHA 29 CFR 1910.1200, AND THE CALIFORNIA GENERAL INDUSTRY SAFETY ORDER 5194.

INGREDIENTS	CAS NO.	PERCENT RANGE	HAZARD DATA
SEVERELY TREATED MINERAL OIL	64742-54-7	70-100	TLV=5MG/M3

## SECTION III

## PHYSICAL DATA

BOILING POINT(DEGREES F): +500 F	MELTING POINT: UNKNOWN
SPECIFIC GRAVITY(H2O=1): 0.87	VAPOR PRESSURE(MMMHG): NEGLIGIBLE AT ROOM TEMP.
VAPOR DENSITY(AIR=1): UNKNOWN	SOLUBILITY IN H2O, % BY WT. INSOLUBLE
% VOLATILES BY VOLUME: NEGLIGIBLE	EVAPORATION RATE(BUTYL ACETATE=1): NEGLIGIBLE
pH: N/A	
APPEARANCE AND ODOR: LIGHT AMBER, SLIGHT OILY ODOR	

## SECTION IV

## FIRE AND EXPLOSION DATA

FLASH POINT (COO): 400 F	FIRE POINT (COO): -
FLAMMABLE LIMITS IN AIR % BY VOLUME: LOWER - UNKNOWN	UPPER - UNKNOWN
EXTINGUISHING MEDIA: CO2, FOAM, DRY CHEMICAL	
SPECIAL FIRE FIGHTING PROCEDURES: TREAT AS MINERAL OIL FIRE	
UNUSUAL FIRE AND EXPLOSION HAZARD: NONE	

## SECTION V

## HEALTH HAZARD INFORMATION

INGREDIENTS LISTED AS CARCINOGENS BY NTP, IARC, OR OSHA: NONE.

## ROUTES OF EXPOSURE AND EFFECTS OF OVEREXPOSURE

INHALATION: TLV FOR PRODUCT NOT ESTABLISHED. REFER TO HAZARDOUS MATERIALS LIST FOR INGREDIENT TLV'S. PRODUCT NOT EXPECTED TO CAUSE RESPIRATORY TRACT IRRITATION.

SKIN CONTACT: CONTINUED CONTACT MAY CAUSE IRRITATION.

SKIN ABSORPTION: SKIN ABSORPTION IS NOT EXPECTED TO OCCUR.

EYE CONTACT: WILL CAUSE EYE IRRITATION.

INGESTION: ORAL LD50 FOR THIS PRODUCT HAS NOT BEEN ESTABLISHED. DO NOT INGEST.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE TO PRODUCT? NONE KNOWN.

## EMERGENCY AND FIRST AID PROCEDURES

EYES: FLUSH EYES WITH WATER FOR 15 MINUTES; CONSULT A PHYSICIAN.

SKIN: WASH EXPOSED AREAS WITH SOAP AND WATER.

INHALATION: IF IRRITATION OCCURS, REMOVE TO FRESH AIR AREA AND AVOID FURTHER INHALATION.

INGESTION: CONSULT A PHYSICIAN.

PAGE 2

CASTROL HYSPIN AW 68 OIL

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**SECTION VI REACTIVITY DATA**

---

CONDITIONS CONTRIBUTING TO INSTABILITY: NONE. PRODUCT IS STABLE UNDER NORMAL CONDITIONS.

INCOMPATIBILITY: STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: THIS PRODUCT WILL NOT POLYMERIZE.

---

**SECTION VII SPILL OR LEAK PROCEDURES**

---

STEPS TO BE TAKEN FOR PRODUCT  
SPILLS AND DISPOSAL

RECOVER FREE LIQUID. KEEP PETROLEUM PRODUCTS OUT OF STREAMS AND WATERWAYS BY DIKING OR IMPOUNDING. ADVISE AUTHORITIES IF PRODUCT HAS ENTERED OR MAY ENTER SEWERS, WATERCOURSES OR EXTENSIVE LAND AREAS. ADD ABSORBENT TO SPILL & VENTILATE ENCLOSED AREAS. INCINERATE ABSORBED MATERIAL. DISPOSE OF FREE LIQUID BY INCINERATION OR THROUGH AN OIL RECLAIM SERVICE.

---

**SECTION VIII SPECIAL PROTECTION INFORMATION**

---

VENTILATION REQUIREMENTS: IF MISTING OCCURS, PROVIDE LOCAL VENTILATION.

SPECIFIC PERSONAL RESPIRATORY EQUIPMENT: IF EXCESSIVE MISTING OCCURS, OR IF ASSOCIATED TLV IS EXCEEDED, PROVIDE NIOSH APPROVED RESPIRATORY EQUIPMENT WITH TC-21C-XXX CARTRIDGE COMBINATION

EYES: FACE SHIELD OR GOGGLES.

GLOVES: IMPERVIOUS IF DESIRED.

OTHER CLOTHING AND EQUIPMENT: NONE REQUIRED.

PROTECTIVE MEASURES FOR REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT: WEAR GLOVES AND PROTECTIVE EYEWEAR AT ALL TIMES DURING EQUIPMENT DECONTAMINATION OR REPAIR.

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**SECTION IX SPECIAL PRECAUTIONS**

---

AVOID CONTACT WITH EYES AND BREATHING MISTS. WASH CONTAMINATED CLOTHING BEFORE REUSE. DO NOT TAKE INTERNALLY. KEEP DRUMS CLOSED WHEN NOT IN USE.

PREPARED BY: A.LUM

DATE: OCT. 01, 1988

# MATERIAL SAFETY DATA SHEET

## CASTROL INDUSTRIAL WEST INC.

09/11/90

5511 DISTRICT BOULEVARD, LOS ANGELES, CALIFORNIA 90040  
PHONE (213) 771 - 7000

## SECTION I

## TRADE NAME

PRODUCT NAME: CASTROL HYPIN AW 32 OIL  
HAZARD CLASS:

## SECTION II

## HAZARDOUS INGREDIENTS

OTHER THAN THE INGREDIENTS LISTED TO THE RIGHT, THIS PRODUCT CONTAINS NO OTHER INGREDIENTS NOW KNOWN TO BE HAZARDOUS AS DEFINED IN OSHA 29 CFR 1910.1000 (SUB-PART Z), OSHA 29 CFR 1910.1200, AND THE CALIFORNIA GENERAL INDUSTRY SAFETY ORDER 5194.

INGREDIENTS	CAS NO.	PERCENT RANGE	HAZARD DATA
SEVERELY TREATED MINERAL OIL	64742-54-7	70-100	TLV=5MG/M3

## SECTION III

## PHYSICAL DATA

BOILING POINT(DEGREES F): +500 F	MELTING POINT: UNKNOWN
SPECIFIC GRAVITY(H2O=1): 0.86	VAPOR PRESSURE(MMHG): NEGLIGIBLE AT ROOM TEMP.
VAPOR DENSITY(AIR=1): UNKNOWN	SOLUBILITY IN H2O, % BY WT. INSOLUBLE
% VOLATILES BY VOLUME: NEGLIGIBLE	EVAPORATION RATE(BUTYL ACETATE=1): NEGLIGIBLE
pH: N/A	
APPEARANCE AND ODOR: LIGHT AMBER, SLIGHT OILY ODOR	

## SECTION IV

## FIRE AND EXPLOSION DATA

FLASH POINT (COC): 390 F	FIRE POINT (COC): --
FLAMMABLE LIMITS IN AIR % BY VOLUME: --	LOWER - UNKNOWN UPPER - UNKNOWN
EXTINGUISHING MEDIA: CO2, FOAM, DRY CHEMICAL	
SPECIAL FIRE FIGHTING PROCEDURES: TREAT AS MINERAL OIL FIRE	
UNUSUAL FIRE AND EXPLOSION HAZARD: NONE	

## SECTION V

## HEALTH HAZARD INFORMATION

INGREDIENTS LISTED AS CARCINOGENS BY NTP, IARC, OR OSHA: NONE.

ROUTES OF EXPOSURE AND EFFECTS OF OVEREXPOSURE

INHALATION: TLV FOR PRODUCT NOT ESTABLISHED. REFER TO HAZARDOUS MATERIALS LIST FOR INGREDIENT TLV'S. PRODUCT NOT EXPECTED TO CAUSE RESPIRATORY TRACT IRRITATION.

SKIN CONTACT: CONTINUED CONTACT MAY CAUSE IRRITATION.

SKIN ABSORPTION: SKIN ABSORPTION IS NOT EXPECT TO OCCUR.

EYE CONTACT: WILL CAUSE EYE IRRITATION.

INGESTION: ORAL LD50 FOR THIS PRODUCT HAS NOT BEEN ESTABLISHED; DO NOT INGEST.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE TO PRODUCT? NONE KNOWN.

EMERGENCY AND FIRST AID PROCEDURES

EYES: FLUSH EYES WITH WATER FOR 15 MINUTES; CONSULT A PHYSICIAN.

SKIN: WASH EXPOSED AREAS WITH SOAP AND WATER.

INHALATION: IF IRRITATION OCCURS, REMOVE TO FRESH AIR AREA AND AVOID FURTHER INHALATION

INGESTION: CONSULT A PHYSICIAN.



PAGE 2

## CASTROL HYPSPIN AW 32 OIL

## SECTION VI

## REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY: NONE. PRODUCT IS STABLE UNDER NORMAL CONDITIONS.  
INCOMPATIBILITY: STRONG OXIDIZERS  
HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: THIS PRODUCT WILL NOT POLYMERIZE.

## SECTION VII

## SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN FOR PRODUCT  
SPILLS AND DISPOSAL

RECOVER FREE LIQUID. KEEP PETROLEUM PRODUCTS  
OUT OF STREAMS AND WATERWAYS BY DIKING OR  
IMPOUNDING. ADVISE AUTHORITIES IF PRODUCT HAS  
ENTERED OR MAY ENTER SEWERS, WATERCOURSES OR  
EXTENSIVE LAND AREAS. ADD ABSORBENT TO SPILL &  
VENTILATE ENCLOSED AREAS. INCINERATE ABSORBED  
MATERIAL. DISPOSE OF FREE LIQUID BY INCINERA-  
TION OR THROUGH AN OIL RECLAIM SERVICE.

## SECTION VIII

## SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS: IF MISTING OCCURS, PROVIDE LOCAL VENTILATION.

SPECIFIC PERSONAL RESPIRATORY EQUIPMENT: IF EXCESSIVE MISTING OCCURS, OR IF ASSOCIATED  
TLV IS EXCEEDED, PROVIDE NIOSH APPROVED  
RESPIRATORY EQUIPMENT WITH TC-21C-XXX  
CARTRIDGE COMBINATION

EYES: FACE SHIELD OR GOGGLES.

GLOVES: IMPERVIOUS IF DESIRED.

OTHER CLOTHING AND EQUIPMENT: NONE REQUIRED.

PROTECTIVE MEASURES FOR REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT: WEAR GLOVES AND  
PROTECTIVE EYEWEAR AT ALL TIMES DURING EQUIPMENT DECONTAMINATION OR REPAIR.

## SECTION IX

## SPECIAL PRECAUTIONS

AVOID CONTACT WITH EYES AND BREATHING MISTS. WASH CONTAMINATED CLOTHING BEFORE REUSE.  
DO NOT TAKE INTERNALLY. KEEP DRUMS CLOSED WHEN NOT IN USE.

PREPARED BY: A.LUM

DATE: OCT. 01, 1988

# MATERIAL SAFETY DATA SHEET

## CASTROL INDUSTRIAL WEST INC.

09/11/98

5511 DISTRICT BOULEVARD, LOS ANGELES, CALIFORNIA 90048  
PHONE (213) 771 - 7000

## SECTION I

## TRADE NAME

PRODUCT NAME: KLEEN 3625 CLEANER NA #1760  
HAZARD CLASS: OSHA: CORROSIVE, RCRA: CORROSIVE (D002), DOT: CORROSIVE

## SECTION II

## HAZARDOUS INGREDIENTS

OTHER THAN THE INGREDIENTS LISTED TO THE RIGHT, THIS PRODUCT CONTAINS NO OTHER INGREDIENTS NOW KNOWN TO BE HAZARDOUS AS DEFINED IN OSHA 29 CFR 1910.1000 (SUB-PART 2), OSHA 29 CFR 1910.1200, AND THE CALIFORNIA GENERAL INDUSTRY SAFETY ORDER 5194.

INGREDIENTS	CAS NO.	PERCENT RANGE	HAZARD DATA
POTASSIUM HYDROXIDE	1310-58-3	5-10	PEL(C)=2MG/M3 TLV(C)=2MG/M3
MONOETHANOLAMINE	141-43-5	5-10	PEL=8MG/M3 STEL=15MG/M3

## SECTION III

## PHYSICAL DATA

BOILING POINT(DEGREES F): 212F	MELTING POINT: UNKNOWN
SPECIFIC GRAVITY(H2O=1): 1.14	VAPOR PRESSURE(MMHG): UNKNOWN
VAPOR DENSITY(AIR=1): UNKNOWN	SOLUBILITY IN H2O, % BY WT. 100%
% VOLATILES BY VOLUME: 55-65	EVAPORATION RATE(BUTYL ACETATE=1): UNKNOWN
pH: 12.5	
APPEARANCE AND ODOR: LIGHT AMBER LIQUID; MILD ODOR	

## SECTION IV

## FIRE AND EXPLOSION DATA

FLASH POINT (COC): NONE FIRE POINT (COC): --  
FLAMMABLE LIMITS IN AIR % BY VOLUME: LOWER - UNKNOWN UPPER - UNKNOWN  
EXTINGUISHING MEDIA: CO2, FOAM, DRY CHEMICAL  
SPECIAL FIRE FIGHTING PROCEDURES: USE SELF-CONTAINED BREATHING EQUIPMENT  
UNUSUAL FIRE AND EXPLOSION HAZARD: NONE

## SECTION V

## HEALTH HAZARD INFORMATION

INGREDIENTS LISTED AS CARCINOGENS BY NTP, IARC, OR OSHA: NONE.  
ROUTES OF EXPOSURE AND EFFECTS OF OVEREXPOSURE  
INHALATION: TLV FOR PRODUCT NOT ESTABLISHED. REFER TO HAZARDOUS MATERIALS LIST FOR INGREDIENT TLV'S. PRODUCT NOT EXPECTED TO CAUSE RESPIRATORY TRACT IRRITATION.  
SKIN CONTACT: CONTINUED CONTACT MAY CAUSE IRRITATION.  
SKIN ABSORPTION: SKIN ABSORPTION IS NOT EXPECTED TO OCCUR.  
EYE CONTACT: WILL CAUSE EYE IRRITATION.  
INGESTION: ORAL LD50 FOR THIS PRODUCT HAS NOT BEEN ESTABLISHED; DO NOT INGEST.  
MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE TO PRODUCT? NONE KNOWN.  
EMERGENCY AND FIRST AID PROCEDURES  
EYES: FLUSH EYES WITH WATER FOR 15 MINUTES; CONSULT A PHYSICIAN.  
SKIN: WASH EXPOSED AREAS WITH SOAP AND WATER.  
INHALATION: IF IRRITATION OCCURS, REMOVE TO FRESH AIR AREA AND AVOID FURTHER INHALATION.  
INGESTION: CONSULT A PHYSICIAN.

PAGE 2

KLEEN 3625 CLEANER NA #1760

## SECTION VI

## REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY: NONE. PRODUCT IS STABLE UNDER NORMAL CONDITIONS.  
INCOMPATIBILITY: CONCENTRATED MINERAL ACIDS, TIN, ZINC, ALUMINUM & ALLOYS  
HAZARDOUS DECOMPOSITION PRODUCTS: NONE

CONDITION CONTRIBUTING TO HAZARDOUS POLYMERIZATION: THIS PRODUCT WILL NOT POLYMERIZE.

## SECTION VII

## SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN FOR PRODUCT  
SPILLS AND DISPOSAL

NEUTRALIZE SPILLS WITH DILUTE MINERAL ACID AND  
D FLUSH INTO WASTE DISPOSAL SYSTEM WITH WATER  
NON-FLAMMABLE. CONTAMINANTS MUST BE REMOVED  
VED PRIOR TO DISPOSAL. ALKALI OR ALUM-POLY  
MERIC DEMULSIFIERS MAY BE USED.

## SECTION VIII

## SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS: IF MISTING OCCURS, PROVIDE LOCAL VENTILATION.

SPECIFIC PERSONAL RESPIRATORY EQUIPMENT: IF EXCESSIVE MISTING OCCURS, OR IF ASSOCIATED  
TLV IS EXCEEDED, PROVIDE NIOSH APPROVED  
RESPIRATORY EQUIPMENT WITH TC-21C-XXX  
CARTRIDGE COMBINATION

EYES: FACE SHIELD OR GOGGLES.

GLOVES: IMPERVIOUS IF DESIRED.

OTHER CLOTHING AND EQUIPMENT: NONE REQUIRED.

PROTECTIVE MEASURES FOR REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT: WEAR GLOVES AND  
PROTECTIVE EYEWEAR AT ALL TIMES DURING EQUIPMENT DECONTAMINATION OR REPAIR.

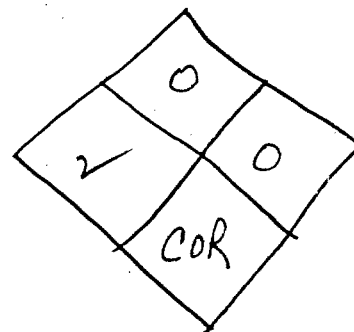
## SECTION IX

## SPECIAL PRECAUTION

AVOID CONTACT WITH EYES AND BREATHING MISTS. WASH CONTAMINATED CLOTHING BEFORE REUSE.  
DO NOT TAKE INTERNALLY. KEEP DRUMS CLOSED WHEN NOT IN USE.

PREPARED BY: JUAN URIBE

DATE: FEBRUARY 08, 1990



# MATERIAL SAFETY DATA SHEET

## CASTROL INDUSTRIAL WEST INC.

5511 DISTRICT BOULEVARD, LOS ANGELES, CALIFORNIA 90040  
PHONE (213) 771 - 7000

### SECTION I

### TRADE NAME

PRODUCT NAME: CASTROL W 329 CUTTING FLUID  
HAZARD CLASS:

### SECTION II

### HAZARDOUS INGREDIENTS

OTHER THAN THE INGREDIENTS LISTED TO THE RIGHT, THIS PRODUCT CONTAINS NO OTHER INGREDIENTS NOW KNOWN TO BE HAZARDOUS AS DEFINED IN OSHA 29 CFR 1910.1000 (SUB-PART 2), OSHA 29 CFR 1910.1200, THE NATIONAL FIRE PROTECTION ASSOCIATION LIST OF HAZARDOUS SUBSTANCES, AND THE CALIFORNIA GENERAL INDUSTRY SAFETY ORDER 5194.

INGREDIENTS	CAS NO.	PERCENT RANGE	HAZARD DATA
SEVERELY REFINED PETROLEUM OIL	64741-96-4	40-60	TLV=5MG/M3 PEL=5MG/M3

CHLORINATED PARAFFIN 68920-70-7 10-20 \*

\* THE SPECIFIC CHLORINATED PARAFFIN INCLUDED IN THIS PRODUCT HASN'T BEEN TESTED OR PROVEN TO CAUSE ADVERSE HEALTH EFFECTS. OTHER CHLORINATED PARAFFINS HAVE BEEN TESTED AND SHOW EVIDENCE OF CARCINOGENICITY IN LABORATORY ANIMALS VIA INGESTION.

### SECTION III

### PHYSICAL DATA

BOILING POINT(DEGREES F): +500F  
SPECIFIC GRAVITY(H2O=1): 0.986  
VAPOR DENSITY(AIR=1): UNKNOWN  
% VOLATILES BY VOLUME: NEGLIGIBLE  
pH: 9.2 @ 5%

MELTING POINT: UNKNOWN  
VAPOR PRESSURE(MMHG): NEG @ 70F  
SOLUBILITY IN H2O, % BY WT. EMULSIFIES  
EVAPORATION RATE(BUTYL ACETATE=1): NEGLIGIBLE

APPEARANCE AND ODOR: CLEAR AMBER LIQUID; MILD ODOR

### SECTION IV

### FIRE AND EXPLOSION DATA

FLASH POINT (COC): >300F  
FLAMMABLE LIMITS IN AIR % BY VOLUME: LOWER - UNKNOWN UPPER - UNKNOWN  
EXTINGUISHING MEDIA: CO2, FOAM, DRY CHEMICAL  
SPECIAL FIRE FIGHTING PROCEDURES: USE SELF-CONTAINED BREATHING EQUIPMENT  
UNUSUAL FIRE AND EXPLOSION HAZARD: NONE KNOWN

### SECTION V

### HEALTH HAZARD INFORMATION

INGREDIENTS LISTED AS CARCINOGENS BY NTP, IARC, OR OSHA: NONE.  
ROUTES OF EXPOSURE AND EFFECTS OF OVEREXPOSURE

INHALATION: TLV FOR PRODUCT NOT ESTABLISHED. REFER TO HAZARDOUS MATERIALS LIST FOR INGREDIENT TLV'S. PRODUCT NOT EXPECTED TO CAUSE RESPIRATORY TRACT IRRITATION.

SKIN CONTACT: CONTINUED CONTACT MAY CAUSE IRRITATION.

SKIN ABSORPTION: SKIN ABSORPTION IS NOT EXPECT TO OCCUR.

EYE CONTACT: WILL CAUSE EYE IRRITATION.

INGESTION: ORAL LD50 FOR THIS PRODUCT HAS NOT BEEN ESTABLISHED; DO NOT INGEST.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE TO PRODUCT? NONE KNOWN.

### EMERGENCY AND FIRST AID PROCEDURES

EYES: FLUSH EYES WITH WATER FOR 15 MINUTES; CONSULT A PHYSICIAN.

SKIN: WASH EXPOSED AREAS WITH SOAP AND WATER.

INHALATION: IF IRRITATION OCCURS, REMOVE TO FRESH AIR AREA AND AVOID FURTHER INHALATION.

INGESTION: CONSULT A PHYSICIAN.

**MATERIAL SAFETY DATA SHEET****CASTROL INDUSTRIAL WEST INC.**

09/11/90

5511 DISTRICT BOULEVARD, LOS ANGELES, CALIFORNIA 90040  
PHONE (213) 771 - 7000**SECTION I****TRADE NAME**PRODUCT NAME: 628 CLEAR ATF  
HAZARD CLASS:**SECTION II****HAZARDOUS INGREDIENTS**

OTHER THAN THE INGREDIENTS LISTED TO THE RIGHT, THIS PRODUCT CONTAINS NO OTHER INGREDIENTS NOW KNOWN TO BE HAZARDOUS AS DEFINED IN OSHA 29 CFR 1910.1000 (SUB-PART Z), OSHA 29 CFR 1910.1200, AND THE CALIFORNIA GENERAL INDUSTRY SAFETY ORDER 5194.

INGREDIENTS	CAS NO.	PERCENT RANGE	HAZARD DATA
SEVERELY SOLVENT TREATED OIL	64741-88-4	70-100	TLV=5MG/M3

**SECTION III****PHYSICAL DATA**

BOILING POINT(DEGREES F): +275C	MELTING POINT: UNKNOWN
SPECIFIC GRAVITY(H <sub>2</sub> O=1): 0.88	VAPOR PRESSURE(MMHG): LESS THAN 0.1 MMHG
VAPOR DENSITY(AIR=1): UNKNOWN	SOLUBILITY IN H <sub>2</sub> O, % BY WT. INSOLUBLE
% VOLATILES BY VOLUME: NEGLIGIBLE	EVAPORATION RATE(BUTYL ACETATE=1): NEGLIGIBLE
pH: N/A	
APPEARANCE AND ODOR: AMBER FLUID; SLIGHT OILY ODOR	

**SECTION IV****FIRE AND EXPLOSION DATA**

FLASH POINT (COC): -302F	FIRE POINT (COC): -
FLAMMABLE LIMITS IN AIR % BY VOLUME: LOWER - UNKNOWN	UPPER - UNKNOWN
EXTINGUISHING MEDIA: CO <sub>2</sub> , FOAM, DRY CHEMICAL	
SPECIAL FIRE FIGHTING PROCEDURES: USE SELF-CONTAINED BREATHING EQUIPMENT	
UNUSUAL FIRE AND EXPLOSION HAZARD: NONE	

**SECTION V****HEALTH HAZARD INFORMATION**

INGREDIENTS LISTED AS CARCINOGENS BY NTP, IARC, OR OSHA: NONE.

**ROUTES OF EXPOSURE AND EFFECTS OF OVEREXPOSURE**

INHALATION: TLV FOR PRODUCT NOT ESTABLISHED. REFER TO HAZARDOUS MATERIALS LIST FOR INGREDIENT TLV'S. PRODUCT NOT EXPECTED TO CAUSE RESPIRATORY TRACT IRRITATION.

SKIN CONTACT: CONTINUED CONTACT MAY CAUSE IRRITATION.

SKIN ABSORPTION: SKIN ABSORPTION IS NOT EXPECT TO OCCUR.

EYE CONTACT: WILL CAUSE EYE IRRITATION.

INGESTION: ORAL LD50 FOR THIS PRODUCT HAS NOT BEEN ESTABLISHED; DO NOT INGEST.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE TO PRODUCT? NONE KNOWN.

**EMERGENCY AND FIRST AID PROCEDURES**

EYES: FLUSH EYES WITH WATER FOR 15 MINUTES; CONSULT A PHYSICIAN.

SKIN: WASH EXPOSED AREAS WITH SOAP AND WATER.

INHALATION: IF IRRITATION OCCURS, REMOVE TO FRESH AIR AREA AND AVOID FURTHER INHALATION.

INGESTION: CONSULT A PHYSICIAN.

PAGE 2

622 CLEAR ATF

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**SECTION VI**

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**REACTIVITY DATA**

---

CONDITIONS CONTRIBUTING TO INSTABILITY: NONE. PRODUCT IS STABLE UNDER NORMAL CONDITIONS.

INCOMPATIBILITY: STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: THIS PRODUCT WILL NOT POLYMERIZE.

---

**SECTION VII**

---

**SPILL OR LEAK PROCEDURES**

---

STEPS TO BE TAKEN FOR PRODUCT  
SPILLS AND DISPOSAL

RECOVER FREE LIQUID. KEEP PETROLEUM PRODUCTS  
OUT OF STREAMS AND WATERWAYS BY DIKING OR  
IMPOUNDING. ADVISE AUTHORITIES IF PRODUCT HAS  
ENTERED OR MAY ENTER SEWERS, WATERCOURSES OR  
EXTENSIVE LAND AREAS. ADD ABSORBENT TO SPILL &  
VENTILATE ENCLOSED AREAS. INCINERATE ABSORBED  
MATERIAL. DISPOSE OF FREE LIQUID BY INCINERA-  
TION OR THROUGH AN OIL RECLAIM SERVICE.

---

**SECTION VIII**

---

**SPECIAL PROTECTION INFORMATION**

---

VENTILATION REQUIREMENTS: IF MISTING OCCURS, PROVIDE LOCAL VENTILATION.

SPECIFIC PERSONAL RESPIRATORY EQUIPMENT: IF EXCESSIVE MISTING OCCURS, OR IF ASSOCIATED  
TLV IS EXCEEDED, PROVIDE NIOSH APPROVED  
RESPIRATORY EQUIPMENT WITH TC-21C-XXX  
CARTRIDGE COMBINATION

EYES: FACE SHIELD OR GOGGLES.

GLOVES: IMPERVIOUS IF DESIRED.

OTHER CLOTHING AND EQUIPMENT: NONE REQUIRED.

PROTECTIVE MEASURES FOR REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT: WEAR GLOVES AND  
PROTECTIVE EYEWEAR AT ALL TIMES DURING EQUIPMENT DECONTAMINATION OR REPAIR.

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**SECTION IX**

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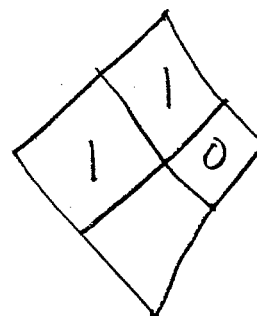
**SPECIAL PRECAUTIONS**

---

AVOID CONTACT WITH EYES AND BREATHING MISTS. WASH CONTAMINATED CLOTHING BEFORE REUSE.  
DO NOT TAKE INTERNALLY. KEEP DRUMS CLOSED WHEN NOT IN USE.

PREPARED BY: A. LUN

DATE: JAN. 01, 1989



**DU PONT****MATERIAL SAFETY DATA SHEET**

Page 1 of 3

**IDENTIFICATION****Name**Nitric Acid, 38°, 40°, 42° B<sub>é</sub> Tech and Reagent Grades**Synonyms**

Weak Nitric Acid

**CAS Name**

Nitric Acid

I.D. Nos./Codes NIOSH Registry No: QU 57750

Wiswesser Code = HN-03

**Manufacturer/Distributor**

E. I. Du Pont de Nemours &amp; Co., (Inc.)

**Address**

Wilmington, DE 19898

**HAZARDOUS COMPONENTS****Material(s)**

Nitric Acid 38°

40°

42°

Reagent

**PHYSICAL DATA****Boiling Point, 760 mm Hg**

119-122°C (246-252°F)

**Specific Gravity**1.355-1.422 @ 15.6°C (60°F) (H<sub>2</sub>O = 1)**Vapor Density**

1 (Air = 1)

**% Volatiles by Vol.**

100%

**Form**

Liquid

**Appearance**

Clear

**pH Information**

&lt; 1

**Chemical Family**

Inorganic Acid

**CAS Registry No.**

7697-37-2

Chemical Formula: HNO<sub>3</sub> (in water)**Product Information and Emergency Phone**

(302) 774-2421

**Transportation Emergency Phone**

(800) 424-9300

**Approximate %**

36.5

61.4

67.3

70.4

**Melting Point**

-20° to -41°C (-4° to -42°F)

**Vapor Pressure**

mm Hg @ 25°C (77°F) = 9-10; @

37.7°C (100°F) = 19-20

**Solubility in H<sub>2</sub>O**

100%

**Evaporation Rate (Butyl Acetate = 1)**

~1

**Color**

Colorless to light brown

**Odor**

Acrid

**Octanol/Water Partition Coefficient****FIRE AND EXPLOSION DATA****Flash Point****Method**

Will not burn

**Autoignition Temperature****Flammable Limits in Air, % by Vol.**

Lower

Upper

**Fire and Explosion Hazards** Oxidizer. Nitric acid increases combustibility and can cause ignition of organic or oxidizable materials. Fire or spillage may produce extremely toxic nitrogen oxide gases. Reaction with many metals gives flammable/explosive hydrogen gas.

**Extinguishing Media:** For Fires in area, use water spray to cool nitric acid tanks or containers.

**Special Fire Fighting Instructions** Wear self-contained breathing apparatus and full acid protective clothing (see PROTECTION INFORMATION on back of page) where possibility of fumes or acid contact exists.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. Information set forth herein is furnished free of charge and is based on technical data that Du Pont believes to be reliable. It is intended for use by persons having technical skills in their own discretion and use. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of information. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

## HAZARDOUS REACTIVITY

Page 2 of 3

*Instability*

Releases toxic gases with heat.

*Incompatibility* Cyanides and sulfides. Reacts vigorously with organics (especially turpentine), oxidizable inorganics, metals (especially powders), and carbides.*Decomposition*

Can occur, as above.

*Polymerization*

Will not occur.

## HEALTH HAZARD INFORMATION

*Exposure Limits*OSHA 8-hour Time Weighted Average (TWA) Nitric Acid = 2 ppm, 5 mg/m<sup>3</sup>; ceiling (nitrogen dioxide) = 5 ppm, 9 mg/m<sup>3</sup>; ACGIH TLV<sup>®</sup> - 2 ppm, 5 mg/m<sup>3</sup> (Nitric Acid).*Routes of Exposure and Effects*

Liquid and vapor cause severe burns.

Harmful if inhaled. May cause delayed lung injury.

Toxic oxides of nitrogen and other dangerous gases may be released when nitric acid is used.

*First Aid*

SEE ATTACHED.

## PROTECTION INFORMATION

*Ventilation* Use only with ventilation adequate to maintain air concentration below exposure limit. Keep in well ventilated room.*Personal Protective Equipment* Coverall chemical safety glasses, rubber gloves and footwear. If potential for major exposure, wear full protective clothing including rubber acid suit, hard hat and air-supplied respirator.

## DISPOSAL PROCEDURES

*Aquatic Toxicity*

Fla 96 = 100-10 ppm.

*Spill, Leak or Release* Keep upwind of leak; evacuate until gas has dispersed. Dike major spill. Neutralize with lime or soda ash. Flush spill area with plenty of water to wastewater treatment system. Do not flush concentrated acid into sewers.*Waste Disposal:* Dispose of in accordance with Federal, State & local regulations. If approved, drain neutralized or dilute acid to sewer to waste treatment plant.

## SHIPPING PRECAUTIONS

*Transportation* DOT Shipping Name - Nitric Acid (over 40%). DOT Hazard Class - oxidizer. STC Code 49 185 28. UN No. 2031. IMCO Class 8.*Shipping Containers*

Railroad tank cars, tank trucks.

*Storage Conditions*

SEE ATTACHED.

## REFERENCES AND ADDITIONAL INFORMATION

Do not breathe vapor.

Do not get in eyes, on skin or clothing.

Wash thoroughly after handling.

For more information refer to: Du Pont Nitric Acid Storage & Handling Bulletin  
Du Pont Nitric Acid Data Sheet

DATE: 2/80





NITRIC ACID, 38°, 40°, 42° & REAGENT MSDS ATTACHMENTHEALTH HAZARD INFORMATIONFirst Aid

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse.

If inhaled, remove person to fresh air immediately. Have patient lie down and keep quiet. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

If swallowed, call a physician. Do not induce vomiting. Give large quantities of water containing any of the following: Milk of Magnesia, milk, magnesium oxide, whites of eggs, or olive oil. Avoid carbonates. Never give anything by mouth to an unconscious person.

SHIPPING PRECAUTIONSStorage Conditions

Keep container closed. Keep out of sun and away from heat. Keep away from fire, sparks and flame. Loosen closures carefully. Never use pressure to empty. Container must not be washed out or used for other purposes. Do not store near cyanides, sulfides, organics, metal powders, carbides, or other readily oxidizable materials.

DATE: 2/

E-33737

**GUIDE 44**

NITRIC ACID  
OXIDIZER, UN2031  
ERG #44, 42 BE, 90 LB.

**ERG90****POTENTIAL HAZARDS****HEALTH HAZARDS**

Poisonous; may be fatal if inhaled, swallowed or absorbed through skin.  
Contact may cause burns to skin and eyes.  
Fire may produce irritating or poisonous gases.  
Runoff from fire control or dilution water may cause pollution.

**FIRE OR EXPLOSION**

May ignite other combustible materials (wood, paper, oil, etc.).  
Violent reaction with water.  
Reaction with fuels may be violent.  
Flammable/poisonous gases may accumulate in tanks and hopper cars.  
Runoff to sewer may create fire or explosion hazard.

**EMERGENCY ACTION**

Keep unnecessary people away; isolate hazard area and deny entry.  
Stay upwind, out of low areas, and ventilate closed spaces before entering.  
Positive pressure self-contained breathing apparatus (SCBA) and chemical protective clothing which is specifically recommended by the shipper or manufacturer may be worn. It may provide little or no thermal protection.  
Structural firefighters' protective clothing is **not** effective for these materials.  
**CALL CHEMTREC AT 1-800-424-9300 FOR EMERGENCY ASSISTANCE.**  
If water pollution occurs, notify the appropriate authorities.

**FIRE**

**Small Fires:** Water, dry chemical or soda ash.

**Large Fires:** Flood fire area with water.

Move container from fire area if you can do it without risk.

Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Stay away from ends of tanks.

For massive fire in cargo area, use unmanned hose holder or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

Keep combustibles (wood, paper, oil, etc.) away from spilled material.

Fully-encapsulating, vapor-protective clothing should be worn for spills and leaks with no fire.

Do not touch or walk through spilled material; stop leak if you can do it without risk.

Use water spray to reduce vapor; **do not** get water inside container.

**Small Spills:** Flush area with flooding amounts of water.

**Large Spills:** Dike far ahead of liquid spill for later disposal.

**FIRST AID**

Move victim to fresh air and call emergency medical care; if not breathing, give artificial respiration; if breathing is difficult, give oxygen.

In case of contact with material, immediately flush skin or eyes with running water for at least 15 minutes.

Remove and isolate contaminated clothing and shoes at the site.

Keep victim quiet and maintain normal body temperature.

Effects may be delayed; keep victim under observation.



# Material Safety Data Sheet

CHEVRON Thinner 350H

"SOLVENT" 35

Page 1 of 7  
CPS210418

TOPCO INC DBA  
9803 SAN FERNANDO RD  
PACOIMA, CA 91331  
Print Date: November 25, 1989

MATERIAL ORDERED FOR:  
FOB EL SEGUNDO REFINERY  
EL SEGUNDO, CA 90245

This Material Safety Data Sheet contains environmental, health and toxicology information for your employees. Please make sure this information is given to them. It also contains information to help you meet community right-to-know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this MSDS must be given to the buyer or the information incorporated in your MSDS. Discard any previous edition of this MSDS.

The Chevron MSDSs have been reformatted and expanded to provide you with useful hazard warnings and health evaluations and to facilitate your compliance with local, State and Federal regulations.

## 1. PRODUCT IDENTIFICATION

CHEVRON Thinner 350H

- DANGER!**
- HARMFUL OR FATAL IF SWALLOWED
  - REPEATED AND PROLONGED BREATHING OF VAPOR OR CONTACT WITH SKIN MAY BE HARMFUL
  - MAY CAUSE SKIN IRRITATION
  - COMBUSTIBLE
  - KEEP OUT OF REACH OF CHILDREN

CHEVRON PRODUCT NUMBER(S): CPS210418  
PRODUCT INFORMATION: (800)582-3835

Revision Number: 12      Revision Date: 07/30/89      MSDS Number: 000059  
NDA - No Data Available      NA - Not Applicable

Prepared According to the OSHA Hazard Communication  
Standard (29 CFR 1910.1200) by the Chevron Environmental  
Health Center, Inc., P.O. Box 4054, Richmond, CA 94804.

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## 2. FIRST AID

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**EYE CONTACT:**

No first aid procedures are required. However, as a precaution flush eyes with fresh water for 15 minutes. Remove contact lenses if worn.

**SKIN CONTACT:**

Remove contaminated clothing. Wash skin thoroughly with soap and water. See a doctor if any signs or symptoms described in this document occur. Discard contaminated non-waterproof shoes and boots. Wash contaminated clothing.

**INHALATION:**

If any signs or symptoms as described in this document occur, move the person to fresh air. If any of these effects continue, see a doctor.

**INGESTION:**

If swallowed, give water or milk to drink and telephone for medical advice. DO NOT make person vomit unless directed to do so by medical personnel. If medical advice cannot be obtained, then take the person and product container to the nearest medical emergency treatment center or hospital. Note to Physician: Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

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## 3. IMMEDIATE HEALTH EFFECTS

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**EYE CONTACT:**

This substance is not expected to cause prolonged or significant eye irritation. This hazard evaluation is based on the data from similar materials.

**SKIN IRRITATION:**

The skin irritation potential of this substance has not been determined. However, it may be a moderate skin irritant so contact with the skin could cause prolonged (days) injury to the affected area. The degree of injury will depend on the amount of material that gets on the skin and the speed and thoroughness of the first aid treatment. Signs and symptoms may include pain or a feeling of heat, discoloration, swelling, and blistering. This hazard evaluation is based on data from similar materials.

**DERMAL TOXICITY:**

If absorbed through the skin, this substance is considered practically non-toxic to internal organs. This hazard evaluation is based on data from similar materials.

**RESPIRATORY/INHALATION:**

Signs and symptoms of central nervous system effects may include one or more of the following: headache, dizziness, loss of appetite, weakness and loss of coordination. This hazard evaluation is based on data from similar materials. Read the Additional Health Data section (12) of this document for more information.

**INGESTION:**

The systemic toxicity of this substance has not been determined. However,

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**Revision Number: 12****Revision Date: 07/30/89****MSDS Number: 000059****NDA - No Data Available****NA - Not Applicable**

it should be practically non-toxic to internal organs if swallowed. Because of the low viscosity of this substance, it can directly enter the lungs if it is swallowed (this is called aspiration). This can occur during the act of swallowing or when vomiting the substance. Once in the lungs, the substance is very difficult to remove and can cause severe injury to the lungs and death. This hazard evaluation is based on data from similar materials.

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#### 4. PROTECTIVE EQUIPMENT

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##### EYE PROTECTION:

No special eye protection is usually necessary.

##### SKIN PROTECTION:

Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including gloves.

##### RESPIRATORY PROTECTION:

Wear approved respiratory protection when working with this material unless ventilation is adequate to keep airborne concentrations below recommended exposure standards.

##### VENTILATION:

Use adequate ventilation to keep the airborne concentrations of this material below the recommended exposure standard.

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#### 5. FIRE PROTECTION

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FLASH POINT: (TCC) 105F (41C) Min.

AUTOIGNITION: 254C (489F)

FLAMMABILITY: 1.0 - 6.0%

EXTINGUISHING MEDIA:

CO2, Dry Chemical, Foam and Water Fog.

**NFPA RATINGS:** Health 1; Flammability 2; Reactivity 0; Special NDA;

**HMIS RATINGS:** Health 1; Flammability 2; Reactivity 0; Other NDA; (Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association or, if applicable, the National Paint and Coating Association, and do not necessarily reflect the hazard evaluation of the Chevron Environmental Health Center. Read the entire document and label before using this product.

##### FIRE FIGHTING PROCEDURES:

Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85 F.

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of normal products of combustion or oxygen deficiency. Read the entire document.

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Revision Number: 12

Revision Date: 07/30/89

MSDS Number: 000059

NDA - No Data Available

NA - Not Applicable

**COMBUSTION PRODUCTS:**

Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

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**6. STORAGE, HANDLING, AND REACTIVITY**

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**HAZARDOUS DECOMPOSITION PRODUCTS:**

NDA.

**STABILITY:**

Stable.

**HAZARDOUS POLYMERIZATION:**

Polymerization will not occur.

**INCOMPATIBILITY:**

May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**SPECIAL PRECAUTIONS:**

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL. DO NOT USE OR STORE near flame, sparks or hot surfaces. USE ONLY IN WELL VENTILATED AREA. Keep container closed. DO NOT weld, heat or drill container. Replace cap or bung. Emptied container still contains hazardous or explosive vapor or liquid. CAUTION! Do not use pressure to empty drum or explosion may result.

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**7. PHYSICAL PROPERTIES**

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**SOLUBILITY:** Soluble in hydrocarbon solvents; insoluble in water.

**APPEARANCE:** Colorless liquid.

**BOILING POINT:** 325 - 404F (Range)

**MELTING POINT:** NA

**EVAPORATION:** 0.13 (BU AC=1)

**SPECIFIC GRAVITY:** 0.795 @ 15.6/15.6C

**VAPOR PRESSURE:** 2.2mm Hg @ 20C (68F) of VOC

**PERCENT VOLATILE (VOLUME %):** 99+%

**VOLATILE ORGANIC COMPOUNDS (VOC):**

795 g/liter (Max.)

**VAPOR DENSITY (AIR=1):** 5.0

**VISCOSITY:** 1.046 cSt @ 37.8C

**MOLECULAR WEIGHT:** 144 (Avg.)

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**8. SPILL RESPONSE AND DISPOSAL**

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**CHEMTREC EMERGENCY PHONE NUMBER:** (800) 424-9300 (24 hour).

**SPILL/LEAK PRECAUTIONS:**

Certain geographical areas have air pollution restrictions concerning the use of materials in work situations which may release volatile components to the atmosphere. Air pollution regulations should be studied to determine if this material is regulated in the area where it is to be used.

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**Revision Number:** 12

**Revision Date:** 07/30/89

**MSDS Number:** 000059

**NDA - No Data Available**

**NA - Not Applicable**

Eliminate all open flame in vicinity of spill or released vapor. Stop the source of the leak or release. Clean up releases as soon as possible, observing precautions in Protective Equipment. Contain liquid to prevent further contamination of soil, surface water or groundwater. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.

**DISPOSAL METHODS:**

Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

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**9. EXPOSURE STANDARDS, REGULATORY LIMITS AND COMPOSITION**

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**COMPOSITION COMMENT:**

All the components of this material are on the Toxic Substances Control Act Chemical Substances Inventory.

The Chevron recommended TLV for this material is 125 ppm.

The percent compositions are given to allow for the various ranges of the components present in the whole product and may not equal 100%.

**PERCENT/CAS# COMPONENT/REGULATORY LIMITS**

100.0 % CHEVRON Thinner 350H

**CONTAINING**

DISTILLATES, HYDROTREATED LIGHT

CAS64742478

LIGHT AROMATIC SOLVENT NAPHTHA

CAS64742956

7.0 % ALKYL BENZENES

CAS68515253

**INCLUDING**

2.0 % 1,2,4-TRIMETHYLBENZENE

CAS95636

A toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.  
SARA 302/304 RQ= POUNDS TPQ=10,000 POUNDS

2.4 % CUMENE

CAS98828

A toxic chemical subject to the reporting requirements of

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**Revision Number: 12****Revision Date: 07/30/89****MSDS Number: 000059****NDA - No Data Available****NA - Not Applicable**

Section 313 of Title III of the Superfund Amendments and  
Reauthorization Act of 1986 and 40 CFR Part 372.

50ppm ACGIH TLV

50ppm OSHA PEL

CERCLA 302.4 RQ=5000 POUNDS

0.8 % TRIMETHYLBENZENES  
CAS108678

TLV - Threshold Limit Value	PEL - Permissible Exposure Limit
STEL - Short-term Exposure Limit	TPQ - Threshold Planning Quantity
RQ - Reportable Quantity	CPS - CUSA Product Code
CC - Chevron Chemical Company	CAS - Chemical Abstract Service Number

## 10. REGULATORY INFORMATION

DOT SHIPPING NAME: PETROLEUM NAPHTHA  
DOT HAZARD CLASS: COMBUSTIBLE LIQUID  
DOT IDENTIFICATION NUMBER: UN1255

SARA 311 CATEGORIES:

1. Immediate (Acute) Health Effects; YES
2. Delayed (Chronic) Health Effects; YES
3. Fire Hazard; YES
4. Sudden Release of Pressure Hazard; NO
5. Reactivity Hazard; NO

WHEN A COMPONENT OF THIS MATERIAL IS SHOWN IN THIS SECTION, THE  
REGULATORY LIST ON WHICH IT APPEARS IS INDICATED.

MESITYLENE	02,26,28,
1,2,4-TRIMETHYLBENZENE	01,02,26,28,
CUMENE	01,02,10,14,17,21,24,26,28,

### REGULATORY LISTS:

01=SARA 313	02=MASS RTK	03=NTP Carcinogen
04=CA Prop. 65	05=MI 406	06=IARC Group 1
07=IARC Group 2A	08=IARC Group 2B	09=SARA 302/304
10=PA RTK	11=NJ RTK	12=CERCLA 302.4
13=MN RTK	14=ACGIH TLV	15=ACGIH STEL
16=ACGIH Calculated TLV	17=OSHA PEL	18=OSHA STEL
19=Chevron TLV	20=EPA Carcinogen	21=TSCTA SECT 4
22=TSCTA SECT 5 SNUR	23=TSCTA SECT 6 RULE	24=TSCTA SECT 12 EXPORT
25=TSCTA SECT 8A CAIR	26=TSCTA SECT 8D REPORT	27=TSCTA SECT 8E
28=Canadian WHMIS		

## 11. PRODUCT TOXICOLOGY DATA

### EYE IRRITATION:

NDA. The hazard evaluation was based on data from similar materials.

Revision Number: 12	Revision Date: 07/30/89	MSDS Number: 000059
NDA - No Data Available	NA - Not Applicable	



**SKIN IRRITATION:**

NDA. The hazard evaluation was based on data from similar materials.

**DERMAL TOXICITY:**

NDA. The hazard evaluation was based on data from similar materials.

**RESPIRATORY/INHALATION:**

NDA. The hazard evaluation was based on data from similar materials.

**INGESTION:**

NDA. The hazard evaluation was based on data from similar materials.

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**12. ADDITIONAL HEALTH DATA**

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**ADDITIONAL HEALTH DATA COMMENT:**

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Symptoms reported include fatigue, concentration difficulties, anxiety, depression, rapid mood swings, and short-term memory loss. The reports are not clear with regard to the types of solvents that may cause these symptoms, and there is controversy among scientists with regard to whether the condition exists or is caused by this type of product. Since many other diseases cause some or all of these conditions, a doctor should be consulted if any appear. Always use this material in strict accordance with the instructions on the label or in this document.

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The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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**Revision Number: 12****Revision Date: 07/30/89****MSDS Number: 000059****NDA - No Data Available****NA - Not Applicable**

PARCELS

PRODUCT  
CODE

DESCRIPTION

3926 ALLAN AIRCRAFT SUPPLY

11643 VAN OWEN STREET

NORTH HOLLYWOOD CA

726  
F-7318

MIRROR GRIND #5561XG  
HYTEC #225

END

**FAISER ALUMINUM  
CHEMICAL CORPORATION**

300 LAKESIDE DRIVE, OAKLAND, CALIFORNIA 94643

**MATERIAL SAFETY  
DATA SHEET**

Company / Plant FARBEST CORPORATION 6715 McKinley Avenue Los Angeles, California 90001-0498	Issue Date Oct 31, 1985	Identification Number FF-7318
Trade Name (Common Name or Synonym) Hytec #225	Emergency Phone Number (213) 758-3181	
Chemical Name Hydrocarbon Mixture	Formula Proprietary and Trade Secret	DOT Identification Number N.A.

**HAZARDOUS INGREDIENTS**

Material or Component	%	CAS NUMBER	1984-85 ACGIH TLV/TWA
Mineral Oil	99	8012-95-1	5 mg/m <sup>3</sup> for oil mist

Do not use or handle this product until safety precautions recommended in this data sheet have been read and understood.

The precise composition of this product is proprietary information. A more detailed disclosure will be provided by FARBEST CORPORATION to qualified Medical or Industrial Hygiene personnel as privileged information upon request in case of need for specific treatment.

**PHYSICAL DATA**

Material is (At Normal Conditions): @ 77°F (25°C)		Appearance and Odor	
<input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Gas <input type="checkbox"/> Other		Fluid with mineral oil odor	
Acidty Alkalinity pH = N.A.	Melting Point N.A. °F Boiling Point N.A. °F	Specific Gravity (H <sub>2</sub> O = 1) 0.9 Solubility in water (% by weight) Negligible	Vapor Pressure (mm Hg at 20°C) N.D.A.

**PERSONAL PROTECTIVE EQUIPMENT**

Respiratory Protection None normally needed.	Hands, Arms, and Body None normally needed.
Eyes and Face Safety Glasses	Other Clothing and Equipment None normally needed.

**EMERGENCY MEDICAL PROCEDURES**

**INHALATION:** Remove to fresh air. Provide oxygen if breathing is difficult. Call a physician.

**INGESTION:** Do not induce vomiting. Call a physician.

**EYES:** Immediately flush with plenty of water for at least 15 minutes. Call a physician.

**SKIN:** Flush skin with water followed by soap and water wash. If irritation occurs, call a physician.

# HEALTH/SAFETY INFORMATION

Health	Inhalation      Mists may cause irritation. Ingestion      May cause gastric irritation. Skin      Prolonged or repeated exposure may cause skin irritation. Eyes      Contact may cause irritation.			
	Threshold Limit Value See "Hazardous Ingredients" section.			
Fire and Explosion	Flash Point(COC) 400 °F <input type="checkbox"/> Not Flammable	Auto Ignition Temperature N.D.A. °F	Flammable Limits in Air Lower N.D.A. % Upper N.D.A. %	Extinguishing Media Use fog, foam, dry chemical or Carbon Dioxide.
	Unusual Fire and Explosion Hazards None			Extinguishing Media Not to be Used Do not use water.
Reactivity	Stability <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable	Incompatibility (Materials to Avoid) Oxidizing Materials.		
	Conditions to Avoid Heat, open flames, and mist formation.			
Hazardous Decomposition Products		Carbon Monoxide and unidentified compounds may be formed by incomplete combustion.		

## ENVIRONMENTAL

### Spill or leak procedures

It is recommended that the purchaser develop a plan which includes procedures for proper storage as well as clean-up of spills or leaks. Procedures should conform to safe practices and provide for proper recovery or disposal. Spills entering surface waters or any watercourses or sewers entering/leading to surface waters that cause a sheen must be reported to the National Response Center - Tel. # 1 (800) 424-8802. Soak up with inert absorbent and scoop into a covered container for disposal.

### Waste Disposal Method\*

Used or unused product should be tested to determine hazard status and disposal requirements.

\*Disposer must comply with Federal, State and Local disposal or discharge laws.

## ADDITIONAL INFORMATION

Avoid breathing mist.  
 Do not ingest.  
 Wash skin thoroughly after contact.  
 Keep away from extreme heat and open flames.  
 Launder contaminated clothing before reuse.

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any representation or warranty, express or implied, regarding the accuracy or correctness.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

**USER ALUMINUM  
CHEMICAL CORPORATION**

100 LAKESIDE DRIVE, OAKLAND, CALIFORNIA 94643

**MATERIAL SAFETY  
DATA SHEET**

Company / Plant FARBEST CORPORATION 6715 McKinley Avenue Los Angeles, California 90001-0498	Issue Date August 7, 1985	Identification Number FF-5726
Trade Name (Common Name or Synonym) Mirror Grind #5561XG	Emergency Phone Number (213) 758-3181	
Chemical Name Mixture	Formula Proprietary and Trade Secret	DOT Identification Number N.A.

**HAZARDOUS INGREDIENTS**

Material or Component	%	CAS NUMBER	1984-85 ACGIH TLV/TWA
Ethylene Glycol	8	1072-11	100 mg/m <sup>3</sup>
Sodium Nitrite	6	7632-00-0	Not Established

Do not use or handle this product until safety precautions recommended in this data sheet have been read and understood.

The precise composition of this product is proprietary information. A more detailed disclosure will be provided by FARBEST CORPORATION to qualified Medical or Industrial Hygiene personnel as privileged information upon request in case of need for specific treatment.

**PHYSICAL DATA**

Material is (At Normal Conditions): @ 77°F (25°C)		Appearance and Odor	
<input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Gas <input type="checkbox"/> Other		Fluid with glycol odor.	
Addity Alkalinity pH = N.A.	Melting Point N.A. °F Boiling Point 212 °F	Specific Gravity (H <sub>2</sub> O = 1) 1.0 Solubility in water (% by weight) Negligible	Vapor Pressure (mm Hg at 20°C) N.D.A.

**PERSONAL PROTECTIVE EQUIPMENT**

Respiratory Protection None normally needed.	Hands, Arms, and Body None normally needed.
Eyes and Face Safety Glasses	Other Clothing and Equipment None normally needed.

**EMERGENCY MEDICAL PROCEDURES**

**INHALATION:** Remove to fresh air. Provide oxygen if breathing is difficult. Call a physician.

**INGESTION:** Do not induce vomiting. Call a physician.

**EYES:** Immediately flush with plenty of water for at least 15 minutes. Call a physician.

**SKIN:** Flush skin with water followed by soap and water wash. If irritation occurs, call a physician.

## HEALTH/SAFETY INFORMATION

<b>Health</b>	Inhalation      Mists may cause irritation.  Ingestion      May cause gastric irritation.  Skin              Prolonged or repeated exposure may cause skin irritation.  Eyes              Contact may cause irritation.		
	Threshold Limit Value <p style="text-align: center;">See "Hazardous Ingredients" section.</p>		
<b>Fire and Explosion</b>	Flash Point(COC) 400 °F  <input type="checkbox"/> Not Flammable	Auto Ignition Temperature  <p style="text-align: center;">N.D.A. °F</p>	Flammable Limits in Air      Extinguishing Media Lower N.D.A.%      Use fog, foam, dry Upper N.D.A.%      chemical or Carbon Dioxide.
	Small Scale Fire and Explosion Potential  <p style="text-align: center;">None</p>		Extinguishing Media Not to be Used  <p style="text-align: center;">Do not use water.</p>
<b>Reactivity</b>	Stability <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable		
	Incompatibility (Materials to Avoid)  <p style="text-align: center;">Oxidizing Materials.</p>		
	Conditions to Avoid  <p style="text-align: center;">Heat, open flames, and mist formation.</p>		
Hazardous Decomposition Products      Carbon Monoxide and unidentified compounds may be formed by incomplete combustion of residue after evaporation.			

## ENVIRONMENTAL

<b>Spill or leak procedures</b>  It is recommended that the purchaser develop a plan which includes procedures for proper storage as well as clean-up of spills or leaks. Procedures should conform to safe practices and provide for proper recovery or disposal. Spills entering surface waters or any watercourses or sewers entering/leading to surface waters that cause a sheen must be reported to the National Response Center - Tel. # 1 (800) 424-8802. Soak up with inert absorbent and scoop into a covered container for disposal.	
<b>Waste Disposal Method*</b>  Used or unused product should be tested to determine hazard status and disposal requirements.	
*Disposer must comply with Federal, State and Local disposal or discharge laws.	

## ADDITIONAL INFORMATION

Avoid breathing mist. Do not ingest. Wash skin thoroughly after contact. Keep away from extreme heat and open flames. Launder contaminated clothing before reuse.
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The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any representation or warranty, express or implied, regarding the accuracy or correctness.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

**MATERIAL SAFETY DATA SHEET**

(Essentially similar to Form OSHA-20) &lt;Complies with 29CFR 1910.1200&gt;

**SECTION I**

CODE NUMBER: E0040

DATE 891101

TRADE NAME: RH HYDRAULIC OIL ISO VG 32

SUPERCEDES  
860521

CHEMICAL FAMILY: PETROLEUM

C.A.S. NO.: "MIXTURE"

CARCINOGENIC INGREDIENTS/OSHA/WTP/IARC: NONE

TSCA INFORMATION: COMPONENTS OF THIS PRODUCT ARE LISTED

**SECTION II — HAZARDOUS INGREDIENTS**

COMPONENTS	C.A.S. NOS.	TLV/PEL PPM	mg/m <sup>3</sup>	PERCENT BY WEIGHT/VOLUME
SOLU REF PETR BASE STOCK	64742-65-0 64742-18-3		5	<100
CONTAINS ZINC SALT OF DIALKYL DITHIOPHOSPHORIC ACID, JUDGED NOT TO AFFECT THE POTENTIAL HEALTH AND ENVIRONMENTAL IMPACT OF THE PRODUCT. THIS PRODUCT DEFINED AS NON-HAZARDOUS EXCEPT AS STATED ABOVE. DISCLOSURE OF INGREDIENTS AVAILABLE TO PHYSICIAN OR NURSE IN EVENT OF MEDICAL EMERGENCY				

**SECTION III — FIRE AND EXPLOSION HAZARD DATA**

HAZARDOUS THERMAL DECOMPOSITION CARBON MONOXIDE AND ASPHYXIANTS		FLAMMABLE LIMITS:	LEL — UEL N/A
EXTINGUISHING MEDIA: CARBON DIOXIDE, DRY CHEMICAL, FOAM, WATERFOG		FLASH POINT:	ASTM D92(COC) >200 °C < 392 °F
UNUSUAL FIRE AND EXPLOSION HAZARDS: SLIGHTLY COMBUSTIBLE, WHEN HEATED ABOVE FLASH POINT WILL RELEASE FLAMMABLE VAPORS WHICH CAN BURN IN OPEN OR BE EXPLOSIVE IN CONFINED SPACES IF EXPOSED TO SOURCE OF IGNITION.		DOT INFORMATION:	OIL N.O.S.

**SPECIAL FIRE FIGHTING PROCEDURES:** DO NOT ENTER ANY ENCLOSED OR CONFINED AREA WITHOUT PROPER PROTECTIVE EQUIPMENT AND SELF CONTAINED BREATHING APPARATUS.

**SECTION IV — PHYSICAL DATA**

BOILING RANGE:	>300 °C	SOLUBILITY:	NEG	PH:	N/D
VAPOR PRESSURE:	<0.01mm Hg @ 20 °C	APPEARANCE AND ODOR:	AMBER, OILY LIQUID PETROLEUM ODOR		
VAPOR DENSITY	EVAPORATION RATE	SPECIFIC GRAVITY	WEIGHT PER GALLON	% VOLATILE BY VOLUME	
HEAVIER THAN AIR	LESS THAN ETHER	0.867	7.22	NIL	

**SECTION V — REACTIVITY DATA**

INCOMPATIBILITY <MATERIALS TO AVOID>: STRONG OXIDIZING AGENTS	
STABILITY:	CONDITIONS TO AVOID:
STABLE	DO NOT HEAT ABOVE FLASH POINT
HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE AND ASPHYXIANTS	
HAZARDOUS POLYMERIZATION	OCCUPATIONAL EXPOSURE LIMIT
NONE	TLV = 5mg/m <sup>3</sup> AS OIL MIST

DAY: (213) 928-3311  
EMERGENCY 24 HOURS:  
CHEMTREC: 800/424-9300

S-150

SAME AS

RH HYDRAULIC OIL ISO VG 32

same as AW32

CODE  
NUMBER

E0040

HEALTH



REACTIVITY

LSC

Lubricating Specialties Company

# **ISC**

Lubricating Specialties Company

**HH HYDRAULIC OIL ISO VG 32**

Manufactured By LUBRICATING SPECIALTIES COMPANY

CODE  
 NUMBER

**E0040**

HEALTH

REACTIVITY

PERSONAL PROTECTION (NFPA)



## **SECTION VI — HEALTH HAZARD DATA**

ROUTE OF EXPOSURE	ADVERSE EFFECTS:	FIRST AID PROCEDURES:	NFPA
	<b>I N G</b> NOT NORMALLY EXPECTED TO CAUSE ANY ILL EFFECTS EXCEPT IN VERY SENSITIVE INDIVIDUALS	DO NOT INDUCE VOMITING. CONSULT PHYSICIAN	
	<b>I N H</b> NO SIGNIFICANT ADVERSE HEALTH EFFECTS ARE EXPECTED TO OCCUR ON SHORT TERM EXPOSURE	REMOVE FROM CONTAMINATED AREA. APPLY ARTIFICIAL RESPIRATION IF UNCONCIOUS CONSULT PHYSICIAN	
	<b>E C Y O E N</b> NOT NORMALLY EXPECTED TO CAUSE ANY ILL EFFECTS EXCEPT IN VERY SENSITIVE INDIVIDUALS	FLUSH WITH COPIOUS AMOUNTS OF WATER. IF IRRITATION DEVELOPES CONSULT PHYSICIAN	
	<b>A S C K O U I N T N E</b> NOT NORMALLY EXPECTED TO CAUSE ANY ILL EFFECTS EXCEPT IN VERY SENSITIVE INDIVIDUALS	WASH WITH SOAP AND WATER. CONSULT PHYSICIAN IF IRRITATION OR INFLAMMATION DEVELOPES.	
	<b>C S C H K O R I N O N I C</b> PROLONGED AND/OR REPEATED CONTACT MAY PRODUCE MILD SKIN IRRITATION AND INFLAMMATION. PERSONNEL WITH PRE-EXISTING SKIN DISORDER SHOULD AVOID CONTACT.	WEAR PROTECTIVE CLOTHING TO AVOID SKIN CONTACT. CONSULT PHYSICIAN IF IRRITATION OR INFLAMMATION DEVELOPES.	

## **<DOT> SECTION VII — SPILL OR LEAK PROCEDURES <EPA>**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: STOP FLOW. WIPE OR MOP UP OR ABSORB WITH DIATOMACEOUS EARTH OR OTHER INERT MATERIAL. STORE IN APPROPRIATE CONTAINER FOR DISPOSAL.

### **WASTE DISPOSAL METHOD:**

IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

TRANSPORTATION INFORMATION: CONSULT 49 CFR PARTS 1-300 AND REFER TO SECTION III OF THIS MSDS FOR ADDITIONAL RECOMMENDATIONS CONCERNING PLACARDING

## **SECTION VIII — SPECIAL PROTECTION INFORMATION**

RESPIRATORY PROTECTION: NONE NORMALLY REQUIRED

PROTECTIVE GLOVES: RECOMMENDED

EYE PROTECTION: REQUIRED

OTHER PROTECTIVE EQUIPMENT:

CHEMICALLY RESISTANT BOOTS AND APRONS RECOMMENDED.

VENTILATION: SUFFICIENT TO MAINTAIN ATMOSPHERE BELOW TLV LIMIT

## **SECTION IX — SPECIAL PRECAUTIONS**

### **PRECAUTIONS TO BE TAKEN WHEN HANDLING OR STORING:**

AVOID STORAGE NEAR OPEN FLAME OR OTHER SOURCES OF IGNITION.

EXCESSIVE MISTING MAY CAUSE SLIPPERY FLOORS. PROPER FOOTWEAR REQUIRED.

PERSONAL HYGIENE: WASH HANDS WITH SOAP AND WATER BEFORE EATING, DRINKING, OR SMOKING.

OTHER PRECAUTIONS: WASH OR TAKE SHOWER IF GENERAL CONTACT OCCURS. REMOVE OIL-SOAKED CLOTHING AND LAUNDRY BEFORE REUSE. DISCARD CONTAMINATED LEATHER GLOVES AND SHOES.

APPROVED BY: RICHARD J. EBERHARDT  
 LABORATORY MANAGER

DATE: 910308



# MATERIAL SAFETY DATA SHEET

DSP 6/85

U.S. DEPARTMENT OF LABOR  
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

NOTE: REQUIRED UNDER USDL SAFETY AND HEALTH REGULATIONS FOR SHIP REPAIRING, SHIPBUILDING  
AND SHIPBREAKING. (29 CFR 1915, 1916, 1917)

## SECTION I

MANUFACTURER'S NAME

National Chemsearch; Div. of NCH Corporation

EMERGENCY TELEPHONE NUMBER

214/438-4144 ext. 013

ADDRESS (NUMBER, STREET, CITY, STATE & ZIP CODE)

2727 Chemsearch Blvd.; Irving, Texas 75062

CHEMICAL NAME & SYNONYMS

TRADE NAME & SYNONYMS

SS-80

CHEMICAL FAMILY

FORMULA

## SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES & SOLVENTS	%	TLV (UNITS)	ALLOYS AND METALLIC COATINGS	%	TLV (UNITS)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

## HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS OR GASES

	%	TLV (UNITS)
Aliphatic Petroleum Distillates	CAS# 9032-32-4	40-60 100 ppm
1,1,1 Trichloroethane	71-55-6	20-40 350 ppm
Methylene Chloride	75-09-2	20-30 100 ppm

## SECTION III - PHYSICAL DATA

BOILING POINT (°F)	I.B.P. 113	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	0.986
VAPOR PRESSURE (mm Hg.)	120	PERCENT VOLATILE BY VOLUME (%)	100
VAPOR DENSITY (AIR=1)	1	EVAPORATION RATE (Bu Ac =1)	0.10
SOLUBILITY IN WATER	Not soluble	DIELECTRIC: 25 KV	
APPEARANCE AND ODOR	Water white, chlorinated odor		

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED)	185°F T.O.C.	FLAMMABLE LIMITS	LEL	UEL
EXTINGUISHING MEDIA	Foam, CO <sub>2</sub> , Chemical			
SPECIAL FIRE FIGHTING PROCEDURES	None			
UNUSUAL FIRE & EXPLOSION HAZARDS	None			

THRESHOLD LIMIT VALUE

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE

Headache, Nausea, Blurred Vision, and Difficulty in Breathing

EMERGENCY & FIRST AID PROCEDURES

INHALATION: Move to fresh air. Treat symptomatically.

SKIN: Apply lanolin rich cream.

EYES: Flush with water for 10-15 minutes. See a physician.

INGESTION: Do not induce vomiting. Give a solution of activated charcoal. See a physician immediately.

SECTION VI - REACTIVITY DATA

STABILITY

☒ STABLE ☐ UNSTABLE

CONDITIONS TO AVOID

INCOMPATIBILITY (MATERIALS TO AVOID)

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS  
POLYMERIZATION

☒ WILL NOT OCCUR ☐ MAY OCCUR

CONDITIONS TO AVOID

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Extinguish all sources of ignition. Ventilate area.

WASTE DISPOSAL METHOD

Wipe up. Do not dispose of in drain or sewer. Dispose of as with any chlorinated solvent.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE)

VENTILATION

LOCAL EXHAUST  
Usually adequate  
MECHANICAL (GENERAL)

SPECIAL

OTHER

PROTECTIVE GLOVES

Neoprene or PVA if skin contacted

EYE PROTECTION

Goggles - acid type splash proof

OTHER PROTECTIVE EQUIPMENT

Neoprene or PVA (Polyvinyl alcohol plastic)

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING

Use with adequate ventilation. Store at constant temperatures below 120°F/50°C.

OTHER PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN.  
Follow label directions.

# CHASE CHEMICAL CO.

13546 Desmond Street  
Pacoima, CA 91331  
(818) 899-7411 • (213) 875-0881

NOV 11 1988

ALLAN AIRCRAFT

MSDS NUMBER

## MATERIAL SAFETY DATA SHEET

PAGE 1

24 HOUR EMERGENCY ASSISTANCE			GENERAL MSDS ASSISTANCE		
SHELL: 713-473-9461 CHEMTREC: 800-424-9300			SHELL: 713-241-4819		
ACUTE HEALTH +	FIRE	REACTIVITY	HAZARD RATING		
+	3	0	LEAST - 0 SLIGHT - 1 MODERATE - 2 HIGH - 3 EXTREME - 4		
*For acute and chronic health effects refer to the discussion in Section III					



SECTION I	NAME
PRODUCT	NEOSOL PROPRIETARY SOLVENT
CHEMICAL NAME	--
CHEMICAL FAMILY	DENATURED ALCOHOL
SHELL CODE	31384 31385

SECTION II-A		PRODUCT/INGREDIENT	
NO.	COMPOSITION	CAS NUMBER	PERCENT
P	NEOSOL PROPRIETARY SOLVENT	MIXTURE	100
1	ETHYL ALCOHOL (190 OR 200 PROOF)	64-17-5	90-95
2	METHYL ALCOHOL	67-56-1	3-4
3	ETHYL ACETATE	141-78-6	<2
4	METHYL ISOBUTYL KETONE	108-10-1	<2
5	HYDROCARBON SOLVENT	64742-89-8	<2

SECTION II-B		ACUTE TOXICITY DATA	
NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
P	NONE ESTABLISHED		NONE
1	13.7 G/KG - RAT	>2.0 G/KG - RABBIT	64000 PPM - 4H - RAT
2	5.6 G/KG - RAT	20 G/KG - RABBIT	1600 PPM - 8 HR - RAT
3	11.0 G/KG - RAT	NONE	APX. 3000 PPM - 4H - RAT
4	2.1 G/KG - RAT	>20 G/KG - RABBIT	73,680 PPM - 4 HR - RAT
5	>25 G/KG - RAT	>5 G/KG - RABBIT	

### SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

#### EYE CONTACT

BASED ON PRESENCE OF COMPONENTS 1, 2 AND 4, PRODUCT IS PRESUMED TO BE MILDLY TO SEVERELY IRRITATING TO THE EYES.

#### SKIN CONTACT

BASED ON PRESENCE OF COMPONENTS 2 AND 4, PRODUCT IS PRESUMED TO BE SLIGHTLY TO MODERATELY IRRITATING TO THE SKIN AND MAY BE SLIGHTLY TOXIC IF ABSORBED THROUGH THE SKIN. PROLONGED OR REPEATED LIQUID CONTACT CAN RESULT IN DEFATTING AND DRYING OF THE SKIN WHICH MAY RESULT IN SKIN IRRITATION AND DERMATITIS.

**INHALATION**

BASED ON PRESENCE OF COMPONENTS 2, 3 AND 4, PRODUCT MAY CAUSE IRRITATION TO THE NOSE, THROAT AND RESPIRATORY TRACT AND BASED ON PRESENCE OF COMPONENTS 3, PRODUCT IS TOXIC. BASED ON PRESENCE OF ALL COMPONENTS, INHALATION MAY PRODUCE CNS DEPRESSION AND LIVER, KIDNEY AND OPTIC NERVE DAMAGE. INHALATION OF VAPORS OF COMPONENT 5 MAY RESULT IN PERIPHERAL NEUROPATHY.

**INGESTION**

BASED ON PRESENCE OF COMPONENTS 4, PRODUCT IS PRESUMED TO BE MODERATELY TOXIC. INGESTION OF PRODUCT MAY PRODUCE CNS DEPRESSION AND LIVER DAMAGE. BASED ON THE PRESENCE OF COMPONENT 5, INGESTION OF PRODUCT MAY RESULT IN VOMITING; ASPIRATION (BREATHING) OF VOMITUS INTO THE LUNGS MUST BE AVOIDED AS EVEN SMALL QUANTITIES MAY RESULT IN ASPIRATION PNEUMONITIS.

**SIGNS AND SYMPTOMS**

IRRITATION AS NOTED ABOVE. EARLY TO MODERATE CNS (CENTRAL NERVOUS SYSTEM) DEPRESSION MAY BE EVIDENCED BY GIDDINESS, HEADACHE, DIZZINESS AND NAUSEA; IN EXTREME CASES, UNCONCIOUSNESS AND DEATH MAY OCCUR. LIVER DAMAGE MAY BE EVIDENCED BY LOSS OF APPETITE, JAUNDICE (YELLOWISH SKIN COLOR) AND SOMETIMES PAIN IN THE UPPER ABDOMEN ON THE RIGHT SIDE. KIDNEY DAMAGE MAY BE EVIDENCED BY CHANGES IN URINE OUTPUT, URINE APPEARANCE OR EDEMA (SWELLING FROM FLUID RETENTION). OPTIC NERVE DAMAGE MAY BE EVIDENCED BY PARTIAL OR COMPLETE LOSS OF VISION. PERIPHERAL NERVE DAMAGE MAY BE EVIDENCED BY MUSCULAR WEAKNESS AND LOSS OF SENSATION IN THE ARMS AND LEGS. ASPIRATION PNEUMONITIS MAY BE EVIDENCED BY COUGHING, LABORED BREATHING AND CYANOSIS (BLUISH SKIN); IN SEVERE CASES DEATH MAY OCCUR.

**AGGRAVATED MEDICAL CONDITIONS**

PREEXISTING EYE, SKIN, AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT. IMPAIRED LIVER, KIDNEY, OPTIC NERVE AND PERIPHERAL NERVE FUNCTIONS FROM PREEXISTING DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

SEE SECTION VI FOR ADDITIONAL HEALTH INFORMATION.

**SECTION IV****OCCUPATIONAL EXPOSURE LIMITS**

NO.	OSHA		ACGIH		OTHER
	PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL	
P	NONE ESTABLISHED				
1	1000 PPM		1000 PPM		
2	200 PPM		200 PPM	250 PPM	
3	400 PPM		400 PPM		
4	100 PPM		50 PPM	75 PPM	
5*			400 PPM		

\* RUBBER SOLVENT RECOMMENDED AS A GUIDELINE.

**SECTION V****EMERGENCY AND FIRST AID PROCEDURES****EYE CONTACT**

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

**SKIN CONTACT**

FLUSH SKIN WITH WATER WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. IF IRRITATION OCCURS, GET MEDICAL ATTENTION. DO NOT REUSE CLOTHING OR SHOES UNTIL CLEANED.

**INHALATION**

REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET MEDICAL ATTENTION.

**INGESTION**

DO NOT GIVE LIQUIDS IF VICTIM IS UNCONSCIOUS OR VERY DROWSY. OTHERWISE, GIVE NO MORE THAN 2 GLASSES OF WATER AND INDUCE VOMITING BY GIVING 30CC (2 TABLESPOONS) SYRUP OF IPECAC.\* IF IPECAC IS UNAVAILABLE, GIVE 2 GLASSES OF WATER AND INDUCE VOMITING BY TOUCHING FINGER TO BACK OF VICTIM'S THROAT. KEEP VICTIM'S HEAD BELOW HIPS WHILE VOMITING. GET MEDICAL ATTENTION.

**NOTE TO PHYSICIAN**

\*IF VICTIM IS A CHILD, GIVE NO MORE THAN 1 GLASS OF WATER AND 15CC (1 TABLESPOON) SYRUP OF IPECAC. IF SYMPTOMS SUCH AS LOSS OF GAG REFLEX, CONVULSIONS OR UNCONSCIOUSNESS OCCUR BEFORE EMESIS, GASTRIC LAVAGE SHOULD BE CONSIDERED FOLLOWING INTUBATION WITH A CUFFED ENDOTRACHEAL TUBE.

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SECTION VISUPPLEMENTAL HEALTH INFORMATION  
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PERSONS ON DISULFIRAM (ANTABUSE(R)) THERAPY SHOULD BE AWARE THAT THE ETHYL ALCOHOL IN THIS PRODUCT IS HAZARDOUS TO THEM JUST AS IS ALCOHOL FROM ANY SOURCE. DISULFIRAM REACTIONS (VOMITING, HEADACHE AND EVEN COLLAPSE) MAY FOLLOW INGESTION OF SMALL AMOUNTS OF ALCOHOL AND HAVE ALSO BEEN DESCRIBED FROM SKIN CONTACT.

STUDIES IN LABORATORY ANIMALS INVOLVING PROLONGED AND REPEATED EXPOSURES TO ETHYL ALCOHOL HAVE RESULTED IN SUCH EFFECTS AS LIVER DAMAGE, EMBRYOTOXICITY, FETOTOXICITY, AND TERATOGENICITY. A TRANSIENT MUTAGENIC EFFECT HAS BEEN REPORTED IN RATS.

SOME ANIMAL STUDIES HAVE REPORTED DEGENERATION OF HEART-MUSCLE AFTER REPEATED EXPOSURE TO HIGH LEVELS OF METHYL ALCOHOL.

A 1985 PUBLICATION REPORTS THAT METHYL ALCOHOL WAS TERATOGENIC IN RATS BY INHALATION AT 20,000 PPM, 7 HOURS/DAY DURING GESTATION. ONLY SLIGHT MATERNAL TOXICITY WAS OBSERVED INDICATING THAT METHYL ALCOHOL WAS PROBABLY A PRIMARY TERATOGEN IN THE RAT UNDER THE CONDITIONS OF EXPOSURE. AT 5,000 PPM EXPOSURE, METHYL ALCOHOL WAS NOT TERATOGENIC. (FUND APPL TOX, 5:727, 1985)

COMPONENT 5 OF THIS PRODUCT MAY CONTAIN CERTAIN ISOPARAFFINS THAT HAVE BEEN DEMONSTRATED TO CAUSE KIDNEY EFFECTS IN MALE RATS AND CARDIAC SENSITIZATION IN OTHER SPECIES. THE RELEVANCE OF THE KIDNEY EFFECTS TO MAN IS UNKNOWN. THERE IS NO EVIDENCE THAT EXPOSURE TO INDUSTRIALLY ACCEPTABLE LEVELS OF HYDROCARBONS (E.G., THE TLV) HAVE PRODUCED CARDIAC EFFECTS IN HUMANS. SUCH SENSITIZATION, HOWEVER, MAY CAUSE FATAL CHANGES IN HEART RHYTHM. THIS LATTER EFFECT HAS BEEN SHOWN TO BE ENHANCED BY HYPOXIA OR THE INJECTION OF ADRENALIN-LIKE AGENTS.

-----  
SECTION VIIPHYSICAL DATA  
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BOILING POINT: 163-174 (DEG F)	SPECIFIC GRAVITY: .7955 TO .8152 (H2O=1)	VAPOR PRESSURE: 42 ± 68 DEG. F (MM HG) (ESTIMATED)
MELTING POINT: NOT AVAILABLE (DEG F)	SOLUBILITY: COMPLETE (IN WATER)	VAPOR DENSITY: 1.8 (AIR=1) (ESTIMATED)
EVAPORATION RATE (N-BUTYL ACETATE = 1): 1.4 (ESTIMATED)		

APPEARANCE AND ODOR: CLEAR, COLORLESS LIQUID. MILD ODOR.

-----  
SECTION VIIIFIRE AND EXPLOSION HAZARDS  
-----

FLASH POINT AND METHOD:  
55-60 DEG. F (TCC)

FLAMMABLE LIMITS /% VOLUME IN AIR  
LOWER: 3.3 UPPER: 19.0

EXTINGUISHING MEDIA  
USE WATER FOG, "ALCOHOL" FOAM, DRY CHEMICAL OR CO2.

## SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS

WARNING. FLAMMABLE. CLEAR FIRE AREA OF UNPROTECTED PERSONNEL. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS). INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

## UNUSUAL FIRE AND EXPLOSION HAZARDS

CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE BUILDUP WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED TO PREVENT WEAKENING OF CONTAINER STRUCTURE.

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SECTION IX REACTIVITY

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STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

## CONDITIONS AND MATERIALS TO AVOID:

AVOID HEAT, SPARKS, FLAME AND CONTACT WITH STRONG OXIDIZING AGENTS. DO NOT STORE OR HANDLE IN ALUMINUM EQUIPMENT AT TEMPERATURES OVER 120 DEG. F.

## HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

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SECTION X EMPLOYEE PROTECTION

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## RESPIRATORY PROTECTION

AVOID BREATHING VAPOR.

USE A NIOSH-APPROVED RESPIRATOR AS REQUIRED TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134, USE EITHER A FULL-FACE, ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

## PROTECTIVE CLOTHING

AVOID CONTACT WITH EYES. WEAR CHEMICAL GOGGLES IF THERE IS LIKELIHOOD OF CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR GLOVES AND OTHER CLOTHING AS REQUIRED TO MINIMIZE CONTACT.

## ADDITIONAL PROTECTIVE MEASURES

USE EXPLOSION-PROOF VENTILATION AS REQUIRED TO CONTROL PARTICULATE CONCENTRATIONS. EYE WASH FOUNTAINS AND SAFETY SHOWERS SHOULD BE AVAILABLE FOR EMERGENCY USE.

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SECTION XI ENVIRONMENTAL PROTECTION

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## SPILL OR LEAK PROCEDURES

WARNING. FLAMMABLE. ELIMINATE ALL IGNITION SOURCES. HANDLING EQUIPMENT MUST BE GROUNDED TO PREVENT SPARKING. \*\*\* LARGE SPILLS \*\*\* EVACUATE THE HAZARD AREA OF UNPROTECTED PERSONNEL. WEAR APPROPRIATE RESPIRATOR AND PROTECTIVE CLOTHING. SHUT OFF SOURCE OF LEAK ONLY IF SAFE TO DO SO. DIKE AND CONTAIN. IF VAPOR CLOUD FORMS, WATER FOG MAY BE USED TO SUPPRESS; CONTAIN RUN-OFF. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND OR OTHER SUITABLE MATERIAL; PLACE IN NON-LEAKING CONTAINERS FOR PROPER DISPOSAL. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE; DISPOSE OF FLUSH SOLUTIONS AS ABOVE. \*\*\* SMALL SPILLS \*\*\* TAKE UP WITH AN ABSORBENT MATERIAL AND PLACE IN NON-LEAKING CONTAINERS; SEAL TIGHTLY FOR PROPER DISPOSAL.

## WASTE DISPOSAL

UNDER EPA - RCRA (40 CFR 261.21), IF THIS PRODUCT BECOMES A WASTE MATERIAL, IT WOULD BE IGNITABLE HAZARDOUS WASTE, HAZARDOUS WASTE NUMBER D001. REFER TO LATEST EPA OR STATE REGULATIONS REGARDING PROPER DISPOSAL.

## ENVIRONMENTAL HAZARDS

EPA - COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT. UNDER EPA-CERCLA ("SUPERFUND") RELEASES TO AIR, LAND OR WATER MAY BE REPORTABLE TO THE NATIONAL RESPONSE CENTER, 800-424-8802 (CIRCUMSTANCES SURROUNDING THE RELEASE AND CLEANUP DETERMINE REPORTABILITY).

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SECTION XII SPECIAL PRECAUTIONS

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VAPORS MAY ACCUMULATE AND TRAVEL TO IGNITION SOURCES DISTANT FROM THE HANDLING SITE; FLASH-FIRE CAN RESULT. KEEP CONTAINERS CLOSED WHEN NOT IN USE. USE (ONLY) WITH ADEQUATE VENTILATION.

WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDRER CONTAMINATED CLOTHING BEFORE REUSE.

DO NOT STORE OR HANDLE IN ALUMINUM EQUIPMENT AT TEMPERATURES OVER 120 DEG. F.

-----  
SECTION XIII

TRANSPORTATION REQUIREMENTS  
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DEPARTMENT OF TRANSPORTATION CLASSIFICATION: FLAMMABLE LIQUID  
D.O.T. PROPER SHIPPING NAME: DENATURED ALCOHOL

OTHER REQUIREMENTS:  
DOT I.D. NO. = NA 1986, GUIDE 28.

-----  
SECTION XIV

OTHER REGULATORY CONTROLS  
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THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

-----  
THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.  
-----

DATE PREPARED: SEPTEMBER 15, 1986  
-----

-----  
JOHN P. SEPESI  
-----

BE SAFE

READ OUR PRODUCT  
SAFETY INFORMATION ...AND PASS IT ON  
(PRODUCT LIABILITY LAW  
REQUIRES IT)

SHELL OIL COMPANY  
PRODUCT SAFETY AND COMPLIANCE  
P. O. BOX 4320  
HOUSTON, TX 77210

NOTE: REQUIRED UNDER USDL SAFETY AND HEALTH REGULATIONS FOR SHIP REPAIRING, SHIPBUILDING  
AND SHIPBREAKING. (29 CFR 1915, 1916, 1917)

## SECTION I

FACTURER'S NAME ational Chemsearch; Div. of NCH Corporation		EMERGENCY TELEPHONE NUMBER 214-438-4144 Ext. 013
ADDRESS (NUMBER, STREET, CITY, STATE & ZIP CODE) 2727 Chemsearch Blvd., Irving, Texas 75062		
CHEMICAL NAME & SYNONYMS	TRADE NAME & SYNONYMS NC-123 LIQUID	
CHEMICAL FAMILY	FORMULA	

## SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES & SOLVENTS	%	TLV (UNITS)	ALLOYS AND METALLIC COATINGS	%	TLV (UNITS)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

## HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS OR GASES

	%	TLV (UNITS)
liphatic Petroleum Distillate	54	100 ppm
1,1,1-Trichloroethane	36	350 ppm

## SECTION III - PHYSICAL DATA

BOILING POINT (°F)	165	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	0.925
VAPOR PRESSURE (mm Hg.)	35	PERCENT, VOLATILE BY VOLUME (%)	91
VAPOR DENSITY (AIR=1)	4.5	EVAPORATION RATE ( <u>Bu Ac</u> =1)	0.10
SOLUBILITY IN WATER	Negligible		
APPEARANCE AND ODOR	Clear to slightly cloudy, amber liquid, solvent odor.		

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED) 110°F. T.O.C.	FLAMMABLE LIMITS	LEL	UEL
EXTINGUISHING MEDIA CO <sub>2</sub> , Dry Chemical, Foam			
SPECIAL FIRE FIGHTING PROCEDURES			

UNUSUAL FIRE &amp; EXPLOSION HAZARDS



## SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

## EFFECTS OF OVEREXPOSURE

Headache, nausea, blurred vision, tightness of the chest.

## EMERGENCY &amp; FIRST AID PROCEDURES

INHALATION: Get to fresh air. Treat symptomatically.

INTERNAL: Do not induce vomiting. Call a physician immediately.

EXTERNAL: Wash with soap and water. Use emollient rich cream.

## SECTION VI - REACTIVITY DATA

CONDITIONS TO AVOID

STABILITY



STABLE



UNSTABLE

INCOMPATIBILITY (MATERIALS TO AVOID)

## HAZARDOUS DECOMPOSITION PRODUCTS

CONDITIONS TO AVOID

HAZARDOUS  
POLYMERIZATIONWILL NOT  
OCCUR

MAY OCCUR

## SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Mop up or flush into floor drain. Ventilate area until vapors are clear.

## WASTE DISPOSAL METHOD

Send to solvent reclaimer.

## SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE)

VENTILATION

LOCAL EXHAUST

Usually adequate

MECHANICAL (GENERAL)

SPECIAL

OTHER

PROTECTIVE GLOVES

PVA

EYE PROTECTION

Goggles when spraying

OTHER PROTECTIVE EQUIPMENT

## SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING &amp; STORING

Store and use at moderate temperatures.

OTHER PRECAUTIONS

Follow label directions. KEEP AWAY FROM CHILDREN.

# Material Safety Data Sheet



FAR WEST OIL CO., INC./11221 FLEETWOOD ST., SUN VALLEY, CA 91352 • (818) 768-3119

## I. General Information

Chemical Name & Synonyms	NOT APPLICABLE	Trade Name & Synonyms	SYNTHETIC COOLANT 3500
Chemical Family	WATER SOLUBLE ORGANIC	Formula	COMPLEX MIXTURE
Proper DOT Shipping Name	LUBRICANT, METAL CUTTING	DOT Hazard Classification	NOT HAZARDOUS
Manufacturer	FAR WEST OIL COMPANY, INC.	Manufacturer's Phone Number	(818) 768-3119
Manufacturer's Address	11221 FLEETWOOD STREET SUN VALLEY, CA 91352	Chemtrec Phone Number	

## II. Ingredients

Principal Hazardous Components	Percent	Threshold Limit Value (units)
PETROLEUM OIL, CAS #64741-96-4	5-10	5mg/M <sup>3</sup> AS MIST IN AIR
PROPRIETARY -	-	ACUTE ORAL LD50 FOR RATS 310-455 mg/Kg
AS DEFINED IN OSHA 29CFR 1910, 1000 AND 1910, 1200.		

## III. Physical Data

Boiling Point (°F)	OVER 212° F	Specific Gravity (H <sub>2</sub> O = 1)	APPROXIMATELY 1
Vapor Pressure (mm Hg.)	NOT DETERMINED	Percent Volatile By Volume (%)	58
Vapor Density (Air = 1)	AS FOR WATER	Evaporation Rate (_____ = 1)	AS FOR WATER
Solubility in Water	COMPLETE	pH	9.6
Appearance & Odor	DARK BLUE LIQUID WITH SLIGHT AMINE ODOR.		

## IV. Fire & Explosion Hazard Data

Flash Point (Test Method)	NO FLASH	Auto Ignition Temperature	NONE
Flammable Limits	NOT FLAMMABLE	LEL	UEL
Extinguishing Media	NOT FLAMMABLE		
Special Fire Fighting Procedures	NONE KNOWN		
Unusual Fire & Explosion Hazards	NONE KNOWN		

# 3500 SYNTHETIC COOLANT

155 GALLONS NET 5 GALLONS NET BATCH #

READ MATERIAL SAFETY DATA SHEET BEFORE USING. FOR INDUSTRIAL USE ONLY.

## INSTRUCTIONS FOR USE

USAGE FOR #3500	STORAGE AND HANDLING	DISPOSAL INSTRUCTIONS
GENERAL MACHINING AT 20:1 DILUTION.	WASH CONTAMINATED CLOTHING BEFORE REUSE.	RECOVER FREE PRODUCT AND PLACE IN CONTAINER. ADD SAND OR CLAY TO OTHER SPILL AREA. KEEP SPILL FROM SEWER OR OTHER WATERWAYS BY DIKING. ALERT PROPER LOCAL AUTHORITIES OF SPILL. RECYCLE OR DISPOSE OF IN ACCORDANCE WITH GOVERNMENT REGULATIONS.
SAWING 10:1 DILUTION.	MINIMIZE BREATHING OF MIST. AVOID CONTACT WITH EYES. DO NOT TAKE INTERNALLY. DO NOT USE NEAR OPEN FLAME. KEEP DRUMS CLOSED WHEN NOT IN USE. DO NOT MIX WITH NITRATES OR OTHER PRODUCTS.	
GRINDING 30:1 DILUTION.		

## SAFETY INFORMATION

HEALTH HAZARD INFORMATION	EMERGENCY AND FIRST AID PROCEDURES	SPECIAL PROTECTION INFORMATION
EYE CONTACT: WILL CAUSE EYE IRRITATION.	EYES: FLUSH WITH WATER FOR 15 MINUTES.	EYES: SAFETY GLASSES IF DESIRED. SKIN: NOT NORMALLY REQUIRED.
SKIN CONTACT: SLIGHT IRRITATION MAY OCCUR AFTER PROLONGED EXPOSURE.	INHALATION: IF IRRITATION OCCURS, REMOVE TO FRESH AIR UNTIL MISTING DISSIPATES. INGESTION: CONSULT PHYSICIAN IMMEDIATELY. CONSULT PHYSICIAN IF IRRITATION PERSISTS IN ANY OF THE ABOVE CONDITIONS.	IMPERVIOUS GLOVES IF DESIRED. VENTILATION REQUIREMENTS: LOCAL VENTILATION IF HEAVY MISTING OCCURS. IF TLV IS EXCEEDED, PROVIDE NIOSH APPROVED RESPIRATOR EQUIPMENT WITH TC-23C-XXX CART-RIDGE COMBINATION.
SKIN ABSORPTION: NOT EXPECTED TO OCCUR.		
INHALATION: TLV NOT ESTABLISHED. REFER TO HAZARDOUS MATERIALS LIST FOR INGREDIENT TLV'S.		
CONCENTRATED MISTING MAY AGGRAVATE BREATHING DISORDERS.		
INGESTION: LD50 HAS NOT BEEN ESTABLISHED. DO NOT INGEST.		

HAZARDOUS MATERIALS		
INGREDIENTS	CAS NO.	% RANGE
PETROLEUM OIL	64741-96-4	7

HAZARD DATA	
5mg/MS AS MIST IN AIR (TLV).	

CAUTION: DO NOT WELD. CUT, GRIND OR EXPOSE EMPTY CONTAINER TO HEAT OR FLAME. EXPLOSION HAZARD.



11221 FLEETWOOD ST. SUN VALLEY, CA 91352 (818) 768-3119

# PRODUCT APPLICATION AND SPECIFICATIONS



3500 SYNTHETIC COOLANT

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## Product Description:

Unique micro-emulsion chemical cutting and grinding fluid designed to be used on both ferrous and non-ferrous metals in most moderate duty machining applications.

## Typical Uses:

Turning, drilling and milling ferrous metals  
20:1, non-ferrous 30:1 dilution.

Sawing at 10:1 dilution.

Surface grinding and centerless  
grinding at 30:1 dilution.

Gear cutting, broaching and tapping  
at 3:1 dilution.

## Features:

Excellent cooling produces good  
close tolerances.

Extended sump life; resistant  
to bacterial attack.

Non-foaming under most conditions.

Safe to use. Free from nitrites,  
phenols, sulfur and chlorine.

Forms a transparent solution.

## Specifications:

Appearance  
Color  
Odor  
pH, @ 20:1 dilution

Light Oily Liquid  
Emerald Green  
Mild and Clean  
9.2

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MANUFACTURED BY:  
FAR WEST OIL CO., INC.  
11221 FLEETWOOD ST.  
SUN VALLEY, CA 91352

DISTRIBUTED BY:

# Material Safety Data Sheet



FAR WEST OIL CO., INC./11221 FLEETWOOD ST., SUN VALLEY, CA 91352 • (818) 768-3119

## I. General Information

Chemical Name &amp; Synonyms NOT APPLICABLE

Chemical Family WATER SOLUBLE ORGANIC

Proper DOT Shipping Name LUBRICANT, METAL CUTTING

Manufacturer FAR WEST OIL CO., INC.

Manufacturer's Address 11221 Fleetwood St.  
Sun Valley, Ca. 91352

Trade Name &amp; Synonyms 3500 SYNTHETIC COOLANT

Formula COMPLEX MIXTURE

DOT Hazard Classification NOT HAZARDOUS

Manufacturer's Phone Number (818) 768-3119

Chemtrec Phone Number

## II. Ingredients

Principal Hazardous Components  
PETROLEUM OIL, CAS#

Percent

7

Threshold Limit Value (units)

5mg/M<sup>3</sup> AS MIST IN AIR\* AS DEFINED IN OSHA 29CFR 1910, 1000  
AND 1910, 1200

## III. Physical Data

Boiling Point (°F) OVER 212° F

Vapor Pressure (mm Hg.) NOT DETERMINED

Vapor Density (Air = 1) AS FOR WATER

Solubility in Water COMPLETE

Appearance & Odor DARK BLUE LIQUID WITH  
SLIGHT AMINE ODOR.Specific Gravity (H<sub>2</sub>O = 1) APPROXIMATELY 1

Percent Volatile By Volume (%) 58

Evaporation Rate ( $\frac{H_{20}}{H_{20}} = 1$ ) AS FOR WATER

pH 9.6

## IV. Fire & Explosion Hazard Data

Flash Point (Test Method) NO FLASH

Flammable Limits NOT FLAMMABLE

Extinguishing Media NOT FLAMMABLE

Special Fire Fighting Procedures NONE KNOWN

Unusual Fire &amp; Explosion Hazards NONE KNOWN

Auto Ignition Temperature NONE

LEL UEL

## V. Health Hazard Data

Threshold Limit Value NOT ESTABLISHED	OSHA Threshold Limit Value NONE ESTABLISHED	ACGIH Threshold Limit Value NONE ESTABLISHED
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Carcinogen - NTP Program NOT A KNOWN CARCINOGEN      Carcinogen - IARC Program NOT A KNOWN CARCINOGEN

Symptoms of Exposure PROLONGED CONTACT WITH  
CONCENTRATE WILL DEFAT SKIN AND MAY CAUSE CONTACT DERMATITIS AS WITH SOAPS AND DETERGENTS.

Medical Conditions Aggravated By Exposure CONCENTRATED MISTING MAY AGGREGATE BREATHING DISORDERS.

Primary Route(s) of Entry BREATHING, IF USED IN SPRAY MIST.

Emergency First Aid (1) EYES: FLUSH WITH WATER FOR 15 MINUTES. (2) SKIN: WASH WITH SOAP AND WATER. (3) INGESTION: CONSULT PHYSICIAN IMMEDIATELY. (4) INHALATION: IF IRRITATION OCCURS, REMOVE TO FRESH AIR UNTIL MISTING DISSIPATES. CONSULT PHYSICIAN IF IRRITATION PERSISTS IN 2 AND 4.

## VI. Reactivity Data

Stability	<del>XXXXXXXX</del> Stable	Conditions To Avoid DO NOT MIX WITH OTHER COOLANTS OR ADD NITRITES OR NITRATES TO THIS PRODUCT.
Incompatibility		Materials To Avoid DO NOT USE ON MAGNESIUM OR MAGNESIUM ALLOYS.
Hazardous Polymerization	<del>XXXXXXXX</del> May Occur	Conditions To Avoid NONE KNOWN
Hazardous Decomposition Products	Will Not Occur	NOT DETERMINED.

## VII. Environmental Protection Procedures

Spill Response RECOVER FREE PRODUCT AND PLACE IN CONTAINER. ADD SAND OR CLAY TO OTHER SPILL AREAS. KEEP SPILL FROM SEWER OR WATERWAYS BY DIKING. ALERT PROPER LOCAL AUTHORITIES OF SPILL.

Waste Disposal Method RECYCLE, OR DISPOSE OF IN ACCORDANCE WITH APPLICABLE GOVERNMENT REGULATIONS.

## VIII. Special Protection Information

Eye Protection SAFETY GLASSES IF DESIRED.	Skin Protection NOT NORMALLY REQUIRED IMPERVIOUS GLOVES IF DESIRED.
Respiratory Protection (Specific Type) NOT NORMALLY	Ventilation Recommended LOCAL VENTILATION
Other Protection REQUIRED.	IF HEAVY MISTING OCCURS.

## IX. Special Precautions

Hygienic Practices In Handling & Storage MINIMIZE BREATHING OF MIST. WASH WELL WITH SOAP AND WATER AFTER USING. DO NOT WEAR CONTAMINATED CLOTHING. WASH OR DRY CLEAN CLOTHING BEFORE WEARING AGAIN. REMOVE CONTAMINATED SHOES AND CLEAN THOROUGHLY.

Precautions For Repair & Maintenance Of Contaminated Equipment EMPTY DRUMS AND TANKS MAY CONTAIN RESIDUE WHICH CAN BE DANGEROUS. DO NOT WELD, CUT, GRIND, DRILL, SOLDER, BRAZE OR EXPOSE CONTAINERS TO HEAT FLAME AND SPARKS, ETC. CONTAINERS MAY EXPLODE AND CAUSE INJURY OR DEATH.

Other Precautions ALL DRUMS SHOULD BE DRAINED, BUNGS REPLACED AND OFFERED TO DRUM RECONDITIONERS OR DISPOSED OF IN ACCEPTABLE MANNER.

# Material Safety Data Sheet

Prepared According to the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
(Formerly Called MATERIAL INFORMATION BULLETIN)



CHEVRON AW Hydraulic Oil 68

RECEIVED

JAN 13 1992

CPS 234228

## TYPICAL COMPOSITION

Highly refined base oils (CAS 64742-65-0, 64742-36-5, 64742-54-7, 64742-01-4)  
Additives including inhibitors, demulsifiers, and antiwear agent containing zinc dialkyldithiophosphate (CAS 68649-42-3)

99%

1%

## EXPOSURE STANDARD

No Federal OSHA exposure standard or ACGIH TLV has been established for this material. Based on information reviewed to date, we recommend an exposure standard of 5 mg/m<sup>3</sup>. This is the Federal OSHA exposure standard and the ACGIH (1985-86) TLV for mineral oil mists.

## PHYSIOLOGICAL & HEALTH EFFECTS

Expected to cause no more than minor eye irritation.

### Eyes

Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. If irritation persists, see a doctor.

Expected to cause no more than minor skin irritation following prolonged or frequently repeated contact. See Additional Health Data.

### Skin

Wash skin thoroughly with soap and water. Launder contaminated clothing.

Not expected to be acutely toxic by inhalation. Breathing mineral oil mist at concentrations in air that exceed the recommended exposure standard can cause respiratory irritation or discomfort. See Additional Health Data.

### Inhalation

If respiratory discomfort or irritation occur, move person to fresh air. See a doctor if irritation continues.

Not expected to be acutely toxic by ingestion.

### Ingestion

If swallowed, give water or milk to drink and telephone for medical advice. Consult medical personnel before inducing vomiting. If medical advice cannot be obtained, then take the person and product container to the nearest medical emergency treatment center or hospital.

## ADDITIONAL HEALTH DATA

See Page 3.

### SPECIAL PROTECTIVE INFORMATION

**Eye Protection:** No special eye protection is necessary.

**Skin Protection:** No special skin protection is necessary.

**Respiratory Protection:** No special respiratory protection is normally required. However, if operating conditions create airborne concentrations which exceed the recommended exposure standard, the use of an approved respirator is recommended.

**Ventilation:** Use adequate ventilation to keep the airborne concentrations of this material below the recommended exposure standard.

### FIRE PROTECTION

**Flash Point:** (COC) 428°F (220°C)

**Autoignition Temp.:** NDA

**Flammability Limits:** n/a

**Extinguishing Media:** CO<sub>2</sub>, Dry Chemical, Foam, Water Fog

**Special Fire Fighting Procedures:** For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. See Hazardous Decomposition Products. Read the entire MSDS.

### SPECIAL PRECAUTIONS

DO NOT weld, heat or drill container. Residue may ignite with explosive violence if heated sufficiently.

CAUTION! Do not use pressure to empty drum or explosion may result.

## ENVIRONMENTAL PROTECTION

X-IRC031 (04-86)

**Environmental Impact:** This material is not expected to present any environmental problems other than those associated with oil spills.

**Precautions if Material is Released or Spilled:** Stop the source of the leak or release. Clean up releases as soon as possible. Contain liquid to prevent further contamination of soil, surface water or groundwater. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.

**Waste Disposal Methods:** Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

### REACTIVITY DATA

**Stability (Thermal, Light, etc.):** Stable.

**Incompatibility (Materials to Avoid):** May react with strong oxidizing materials.

**Hazardous Decomposition Products:** Normal combustion forms carbon dioxide and water vapor and may produce oxides of sulfur and phosphorus; incomplete combustion can produce carbon monoxide.

**Hazardous Polymerization:** Will not occur.

### PHYSICAL PROPERTIES

**Solubility:** Soluble in hydrocarbon solvents; insoluble in water.

**Appearance (Color, Odor, etc.):** Pale yellow liquid.

**Boiling Point:** n/a

**Melting Point:** n/a

**Specific Gravity:** 0.88 @ 15.6/15.6°C

**Vapor Pressure:** n/a

**Vapor Density (Air=1):** n/a

**Percent Volatile (Volume %):** n/a

**Evaporation:** n/a

**Pour Point:** -28°C (-18.4°F) Max.

**Viscosity:** 65 cSt @ 40°C

n/a = Not Applicable

NDA = No Data Available

The above information is based on data of which we are aware and is believed to be correct as of the date hereof. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

No. 80



# Material Safety Data Sheet

CHEVRON AW Hydraulic Oil 68

CPS 234228

## ADDITIONAL HEALTH DATA

Signs and symptoms of respiratory tract irritation may include, but may not be limited to, one or more of the following, depending on concentration and length of exposure: nasal discharge, nosebleed, sore throat, coughing, bronchitis, pulmonary edema and difficulty in breathing.

This product contains zinc dialkyldithiophosphate (ZDDP). ZDDPs have been tested by repeated application to the skin of young rabbits for three weeks. These rabbits developed severe skin damage, weight loss, and adverse testicular effects. Follow-up studies indicated similar testicular effects can be produced by placing rabbits on a restricted diet and causing them to lose weight or by treating rabbits with simple caustic chemicals and causing them to develop both severe skin irritation and weight loss. Rats similarly treated with ZDDP did not develop testicular effects even when skin damage and weight loss occurred. These results indicate that the testicular effects seen in rabbits were not caused by the toxicity of ZDDPs but were due to the species reaction to stress from severe skin irritation and weight loss. There is no evidence that human exposure to ZDDPs in the workplace will cause testicular effects since occupational exposure does not cause stress from severe skin irritation and weight loss similar to that observed in rabbits. In summary, we now believe there is no risk of male reproductive impairment from working with ZDDP.

Several ZDDPs have also been found to have weak mutagenic activity in cultured mammalian cells. The low level of activity occurred only at ZDDP concentrations which were highly toxic to the test cells. Since mutagenic activity was observed with zinc chloride but not with calcium dialkyldithiophosphate, the weak mutagenic activity of ZDDP may be due to the zinc in the chemical. Zinc is abundant in the environment, is an essential element in our diets, and it is generally accepted that zinc is not a health hazard. Therefore, we do not believe the test results discussed above indicate a genetic hazard to employees working with ZDDPs. Appropriate personal hygiene procedures as outlined in the MSDS, should, of course, be followed since ZDDPs in concentrated form are irritating to the skin.

This product contains base oils which the International Agency for Research on Cancer (IARC) classifies as having no evidence of carcinogenic potential.

X-IRC041 (07-85)

A.R.P. makeup

## MATERIAL SAFETY DATA SHEET HYDROFLUORIC ACID, 70%, TECHNICAL - HF 1220-1

## SECTION 01 IDENTIFICATION

\*\*\*\*\*  
INFO FURNISHED BY..... E.I. DU PONT DE NEMOURS & CO. 'INC.'  
ADDRESS..... WILMINGTON, DE 19893  
DATE EFFECTIVE..... 4/80  
CHEMICAL NAME/SYNONYMS... HYDROFLUORIC ACID, 70%, TECHNICAL - HF  
CHEMICAL FAMILY..... INORGANIC ACID  
EMERGENCY PHONE #..... 302-774-2421  
CAS #..... 7664-39-3  
CAS NAME...HYDROFLUORIC ACID  
I.D.NOS./CODES-NIOSH ACCES NO...MH78900  
WISWESSER LINE NOTATION...FH 'FOR ANYHOROJS' HF 'AQUEOUS SOLUTION'  
TRANSPORTATION EMERGENCY PHONE...800-424-9300

## SECTION 02 PHYSICAL DATA

\*\*\*\*\*  
BOILING POINT..... 760 MM HG-66.6 DEG C \*151.9 DEG F\*  
% VOLATILE BY VOLUME..... 100  
MELTING POINT..... -70.2 DEG C \*-74.4 DEG F\*  
VAPOR PRESSURE..... 150 MM HG @ 25 DEG C \*77 DEG F\*  
VAPOR DENSITY/AIR IS 1... APPROX. 3  
SOLUBILITY IN WATER..... % BY WT.-EQUALS 100  
APPEARANCE & COLOR..... CLEAR 'FUMES IN MOIST AIR' COLORLESS LIQUID\*\*  
SPECIFIC GRAVITY..... 1.23 @ 20 DEG C \*68 DEG F\*  
EVAPORATION RATE..... APPROX. 14  
\*260 MM HG @ 37.7 DEG C \*99.9 DEG F\*  
\*\*ACRID, IRRITATING ODOR  
PH INFORMATION...LESS THAN 2  
OCTANOL/WATER PARTITION COEFFICIENT...LOG P EQUALS -0.94

## SECTION 03 FIRE AND EXPLOSION HAZARD DATA

\*\*\*\*\*  
FLASH POINT..... WILL NOT BURN  
FIRE AND EXPLOSION HAZARDS...HF 'PARTICULARLY IN DILUTE AQUEOUS SOLUTION  
ATTACK MOST METALS, RELEASING POTENTIALLY EXPLOSIVE HYDROGEN GAS.  
EXTINGUISHING MEDIA...WATER, CARBON DIOXIDE 'CO2' FOR FIRES IN AREA.  
SPECIAL FIRE FIGHTING INSTRUCTIONS...KEEP UPWIND. IF THERE IS ANY POSSI  
OF DIRECT CONTACT, WEAR FULL PROTECTIVE CLOTHING AND SELF-CONTAINED OR  
AIR-SUPPLIED BREATHING APPARATUS. DO NOT GET WATER IN TANK--CAUSES  
GENERATION OF HEAT AND POSSIBLE SPATTERING.

## SECTION 04 REACTIVITY DATA

\*\*\*\*\*  
INSTABILITY...STABLE.  
INCOMPATIBILITY...REACTION WITH CYANIDES, SULFIDES, METALS MAY RELEASE  
POISONOUS CYANIDE OR HYDROGEN SULFIDE GAS, OR FLAMMABLE HYDROGEN GAS.  
POLYMERIZATION...WILL NOT OCCUR.

## SECTION 05 SPILL, LEAK AND DISPOSAL PROCEDURES

\*\*\*\*\*  
SPILL, LEAK OR RELEASE...SEE BELOW.  
WASTE DISPOSAL...DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL  
REGULATIONS. IF APPROVED, MAY BE REMOVED TO LANDFILL.

## SECTION 06 HEALTH HAZARD DATA

\*\*\*\*\*  
EXPOSURE LIMITS...ACGIH 1979 TLV'R\* 8-HOUR TIME WEIGHTED AVERAGE EQUALS

... TO GOOD FAITH, BUT NO WARRANTY, EXPRESS

25/01 10:18 FAX 2107710520

MILLHORN CO.

21

## MATERIAL SAFETY DATA SHEET HYDROFLUORIC ACID, 70%, TECHNICAL - HF

## SECTION 06 HEALTH HAZARD DATA

\*\*\*\*\*  
OR 2 MG/M3 'AS F'. DU PONT RECOMMENDS THIS BE TREATED AS CEILING LIMIT.  
ROUTES OF EXPOSURE AND EFFECTS...EXTREMELY HAZARDOUS LIQUID AND VAPOR. CA  
SEVERE BURNS, WHICH MAY NOT BE IMMEDIATELY PAINFUL OR VISIBLE..CONCENTRAT  
BELOW 50% MAY NOT PRODUCE SYMPTOMS FOR 8 HOURS OR LONGER. WEARING CLOTH  
'SUCH AS SHOES, GLOVES', CONTAMINATED WITH HF MAY RESULT IN PAINFUL, DEL  
EFFECTS. HF VAPOR CAN CAUSE SKIN IRRITATION AND DELAYED BURNS. INHALAT  
OF VAPORS MAY CAUSE DAMAGE TO LUNGS AND RESPIRATORY SYSTEM AND PULMONARY  
EDEMA.

## SECTION 07 FIRST AID PROCEDURES AND PHYSICIAN NOTES

\*\*\*\*\*  
FIRST AID...SPEED IN REMOVING HF FROM SKIN OR EYES IS OF PRIMARY IMPORTANCE  
FIRST AID MUST BE STARTED IMMEDIATELY, WITHIN SECONDS OF CONTACT OR SUSPEC  
CONTACT. ALL PERSONS WHO MAY BE EXPOSED TO HF, AND THEIR SUPERVISORS, SHOU  
BE FAMILIAR WITH THE FIRST AID PROCEDURES.

SKIN CONTACT-IMMEDIATELY SHOWER WITH COPIOUS AMOUNTS OF WATER WITHIN SECON  
AFTER CONTACT OR SUSPECTED CONTACT, AND COMPLETELY REMOVE ALL CLOTHING WHI  
IN THE SHOWER. STAY IN THE SHOWER UNTIL ASSURED THAT ALL TRACES OF HF ARE  
REMOVED. THIS MAY TAKE UP TO 30 MINUTES OR LONGER. EXAMINATION AND TREATME  
BY A PHYSICIAN IS RECOMMENDED AS QUICKLY AS FEASIBLE. IT MAY BE NECESSARY  
TRANSPORT THE VICTIM TO THE NEAREST HOSPITAL EMERGENCY ROOM. REMEMBER ALSO  
THAT CONCENTRATED HF CAUSES IMMEDIATE PAIN BUT DILUTE HF SOLUTIONS MAY NOT  
CAUSE REDNESS, BURNING OR PAIN UNTIL SEVERAL MINUTES OR EVEN HOURS HAVE  
ELAPSED.

EYE CONTACT-FLUSH EYES IMMEDIATELY WITH LARGE QUANTITIES OF CLEAN WATER WHI  
HOLDING THE EYELIDS APART. CONTINUE FLUSHING AT 15-MINUTE INTERVALS, ALTERA  
ING WITH THE FOLLOWING TREATMENT...APPLY ICE COMPRESSES WHILE AWAITING EXA  
ATION BY AN EYE PHYSICIAN. 'IT MAY BE NECESSARY TO TAKE VICTIM TO THE NEA  
HOSPITAL EMERGENCY ROOM'. FOR EYE PAIN, A DROP OF 0.5% PONTACAINE  
HYDROCHLORIDE MAY BE INSTILLED IN THE EYE. USE NO OILS OR OINTMENTS.

VAPOR INHALATION-IMMEDIATELY REMOVE THE VICTIM TO AN UNCONTAMINATED ATMOS  
PHERE. CALL A PHYSICIAN. ADMINISTER OXYGEN AS SOON AS POSSIBLE. OXYGEN IN  
TION MAY BE REPEATED AT HALF-HOUR INTERVALS FOR A TOTAL OF 3 OR 4 HOURS O  
UNTIL NO SHORTNESS OF BREATH IS PRESENT AND THE VICTIM'S NORMAL SKIN COLOR  
RETURNED. KEEP THE VICTIM WARM.

INGESTION-DO NOT INDUCE VOMITING. IMMEDIATELY DRINK A LARGE QUANTITY OF MI  
OR WATER WITH ADDED MILK OF MAGNESIA. CALL A PHYSICIAN. THROAT BURNS MAY C  
SEVERE SWELLING AND REQUIRE A TRACHEOTOMY 'OPENING THE WINDPIPE'. THE VICT  
SHOULD BE ADMITTED TO THE HOSPITAL AND CAREFULLY ATTENDED.

NOTES TO PHYSICIAN-INTRODUCTION...THE CHOICE OF THERAPY FOLLOWING FIRST AI  
MEASURES IS AT THE DISCRETION OF THE ATTENDING PHYSICIAN. SELECTION OF THE  
BEST TREATMENT WILL DEPEND ON THE FOLLOWING FACTORS...

CONCENTRATION AND TEMPERATURE OF THE HF.

DEGREE AND EXTENT OF THE BURN.

AREAS OF THE BODY AFFECTED.

FIRST AID MEASURE TAKEN BEFORE PHYSICIAN'S ARRIVAL.

GENERAL CONDITION OF THE VICTIM. \*CONTINUED IN SECTION 9

## SECTION 08 SPECIAL HANDLING INFORMATION

\*\*\*\*\*  
VENTILATION...USE ONLY WITH VENTILATION ADEQUATE TO MAINTAIN EXPOSURE LIMI  
USE FORCED DRAFT VENTILATION, AND SCRUBBERS FOR FUME CONTROL.

PERSONAL PROTECTIVE EQUIPMENT...CHEMICAL SPLASH GOGGLES., PVC OR NEOPRENE  
GAUNTLET GLOVES AND FOOTWEAR., LONGSLEEVE COVERALLS, HARD-HAT WITH BRIM.

## MATERIAL SAFETY DATA SHEET HYDROFLUORIC ACID, 70%, TECHNICAL - HF

## SECTION 08 SPECIAL HANDLING INFORMATION

\*\*\*\*\*  
 OSHA-PERMISSIBLE GAS MASK OR CHEMICAL CARTRIDGE, OR SUPPLIED AIR OR SELF-CONTAINED BREATHING APPARATUS. SEE 29CFR 1910.134 AND NIOSH PUBLICATION 78-210.

## SECTION 09 SPECIAL PRECAUTIONS AND ADDITIONAL INFORMATION

\*\*\*\*\*  
 TRANSPORTATION...

DOT SHIPPING NAME...HYDROFLUORIC ACID SOLUTION. DOT HAZARD CLASS - CORROSIVE MATERIAL. 49 SIC CODE 49 300 22 UN #1790. IMCO CLASS 8. SHIPPING CONTAINERS...RAILROAD TANK CAR, TANK TRUCK, 1 QT PE SAMPLE BOTTLE. STORAGE CONDITIONS...KEEP IN WELL VENTILATED AREA AWAY FROM HEAT, SPARKS, FLAME. KEEP CONTAINER TIGHTLY CLOSED. STORAGE FACILITIES SHOULD BE CONSTRUCTED FOR CONTAINMENT AND DILUTION/NEUTRALIZATION OF SPILLS.

\*THE FOLLOWING METHODS HAVE BEEN EFFECTIVE IN THE TREATMENT OF HF BURNS. SKIN CONTACT-ICED SOLUTIONS-THE BURNED AREA IS IMMERSSED IN AN ICED AQUEOUS 70% ALCOHOL SOLUTION OF BENZALKONIUM CHLORIDE IN A CONCENTRATION OF 0.13% IMMERSION IS NOT PRACTICAL, COMPRESSES OF ONE OF THE ICED SOLUTIONS OR 1 WATER COMPRESSES CAN BE APPLIED. THE TREATMENT SHOULD BE CONTINUED FOR INTERVALS VARYING FROM 1-4 HOURS DEPENDING ON PAIN AND THE APPEARANCE OF BURN. AVOID FREEZING THE TISSUES. BENZALKONIUM CHLORIDE AND ALCOHOL SOLUTION SHOULD NOT BE USED AROUND THE EYES SINCE THEY MAY CAUSE IRRITATION AND A CALCIUM GLUCONATE GEL \*2.5%\*-TOPICALLY APPLIED GEL MUST BE RUBBED IN CONTINUOUSLY UNTIL PAIN HAS COMPLETELY SUBSIDED. CALCIUM GLUCONATE GEL SHOULD NOT BE USED UNTIL AFTER THOROUGH AND COMPLETE WASHING OF THE SKIN WITH WATER. CALCIUM GLUCONATE TOPICAL INJECTIONS-WHEN THERE IS EVIDENCE OF SKIN PENETRATION AS IN SECOND OR THIRD DEGREE BURNS, A 5% CALCIUM GLUCONATE SOLUTION STANDARD AMPULE IS 10% FOR INTRAVENOUS USE\* IS MIXED WITH A 2% XYLOCAINE SOLUTION AND IS INJECTED BY INFILTRATING THE SKIN AND SUBCUTANEOUS TISSUES IN SAME MANNER AS THE INJECTION OF A LOCAL ANESTHETIC SUBCUTANEOUSLY. CARE SHOULD BE TAKEN TO AVOID OVER-DOSEING WITH CALCIUM. ALL SKIN WHICH HAS BEEN EXPOSED SHOULD BE INFILTRATED INCLUDING UP TO 1/4 INCH AROUND THE AREA. THIS MAY PREVENT THE DEVELOPMENT OF SEVERE BURNS. BURNS AROUND THE FINGERNAIL MAY REQUIRE SPLITTING THE NAIL FROM THE DISTAL END IN ORDER TO RELIEVE PAIN AND FACILITATE DRAINAGE PRIOR TO SOAKING WITH ONE OF THE ABOVE MENTIONED SOLUTIONS.

TOPICAL APPLICATIONS-AFTER ADMINISTERING FIRST AID, ROUTINE BURN TREATMENT INCLUDING A&D OINTMENT, TOPICAL STEROID CREAM, OR OINTMENT MAY BE APPLIED. SURGICAL EXCISION-IMMEDIATE EXCISION OF SMALL AREAS BURNED WITH CONCENTRATED SOLUTIONS OF HF MAY PREVENT A PAINFUL, SLOW HEALING BURN. PRIMARY CLOSURE, EXCISION OR SKIN GRAFTING IF INDICATED, MAY PROVIDE MORE RAPID HEALING AND LESS SCARRING.

\*\*CONTINUED IN SECTION 99-FOOTNOTES

## SECTION 10 HAZARDOUS INGREDIENTS

\*\*\*\*\*  

MATERIAL'S	APPROXIMATE %
HYDROGEN FLUORIDE	71

## SECTION 99 FOOTNOTES

\*\*\*\*\*  
 REFERENCES AND ADDITIONAL INFORMATION...

DO NOT GET IN EYES, ON SKIN, ON CLOTHING.

DO NOT BREATHE VAPOR.

WASH THOROUGHLY AFTER HANDLING.

BEFORE USING, READ DU PONT HYDROFLUORIC ACID DATA SHEET.

FOR MORE INFORMATION, REFER TO...DU PONT HYDROFLUORIC ACID PROPERTIES.

5/01. 13:20 FAX 2137710520

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## MATERIAL SAFETY DATA SHEET HYDROFLUORIC ACID, 70%, TECHNICAL - HF

## SECTION 99 FOOTNOTES

\*\*\*\*\*  
STORAGE AND HANDLING BULLETIN., NIOSH/OSHA \*\*POCKET GUIDE TO CHEMICAL  
HAZARDS\*\*, NIOSH PUBLICATION 78-210., AND NIOSH GUIDE TO RESPIRATORY  
PROTECTION, PUBLICATION 76-189.

\*\*NOTES TO PHYSICIAN CONTINUED FROM SECTION 9...

EYE CONTACT-APPLY FIRST AID MEASURES AS DESCRIBED AND A SPECIALIST SHOULD  
CONSULTED IMMEDIATELY.

VAPOR INHALATION-APPLY FIRST AID MEASURES. WHEN IN DOUBT, VICTIM SHOULD B  
HOSPITALIZED AND OBSERVED FOR SIGNS OF PULMONARY EDEMA OR OTHER RESPIRATO  
DISTRESS. THE HOSPITALIZATION SHOULD COVER A 48-HOUR PERIOD MINIMUM AND  
TREATMENT WITH BRONCHIAL DILATORS. SYSTEMIC STEROIDS AND ANTIBIOTICS MAY  
USED AS REQUIRED.

INGESTION-APPLY FIRST AID MEASURES AS DESCRIBED. GASTRIC LAVAGE WITH LIME  
WATER OR MILK MAY BE PERFORMED BY A PHYSICIAN ONLY. DO NOT INDUCE VOMITIN

# HYDROFLUORIC ACID

## Technical

### Anhydrous and 70% Solution

Both anhydrous hydrofluoric acid (AHF, hydrogen fluoride, M.W.-20.006) and the 70% aqueous solution (HF-70%) are clear, colorless, corrosive liquids with a sharp, penetrating odor. Both of these products are hygroscopic and fume when exposed to moist air. They are miscible with water in all proportions and will evolve heat upon dilution.

Du Pont manufactures and ships bulk quantities of AHF and HF-70%. As a safety-oriented service to customers, Du Pont provides trained drivers and its own truck fleet dedicated exclusively to hydrofluoric acid service. Typical deliveries with these tank trucks for both AHF and HF-70% are 40,000 pounds net.

Both grades are also available by rail shipment. Tank cars in AHF service have capacities of 6,000, 11,000 and 28,000 gallons. HF-70% is shipped in 8,000 and 20,000 gallon tank cars.

#### PHYSICAL PROPERTIES OF AQUEOUS HYDROFLUORIC ACID-70%

Boiling point (760 mm Hg), C	66.6
F	151.9
Freezing point, C	-70.2
F	-94.4
Vapor pressure, 25 C (77 F), mm Hg	150
(See Figure 1)	psia 2.9
	kPa 20.0
Density, liquid, 25 C (77 F),	
(See Figure 2)	g/ml (Mg/m <sup>3</sup> ) 1.22
	lb/gal 10.18
Viscosity, 25 C (77 F), cP (mPa·s)	0.61
Conductivity, 0 C (32 F), mhos/cm	7.9 × 10 <sup>-1</sup>
S/m	79

#### PHYSICAL PROPERTIES OF ANHYDROUS HYDROFLUORIC ACID

Boiling point (760 mm Hg), C	19.5
F	67.1
Freezing point, C	-83.5
F	-118.3
Vapor pressure, 25 C (77 F), mm Hg	912
(See Figure 1)	psia 17.6
	kPa 121.6
Density, liquid, 0 C (32 F),	
(See Figure 2)	g/ml (Mg/m <sup>3</sup> ) 1.015
	lb/gal 8.47
Viscosity, 0 C (32 F), cP (mPa·s)	0.26
10 C (50 F), cP (mPa·s)	0.23
Critical temperature, C	188.0
F	370.4
Critical pressure, atm	64.0
MPa	6.48
Critical density, g/ml	0.29
Critical volume, ml/g·mol	69.0
Specific heat, liquid, 0 C (32 F),	
	cal/g·C (Btu/lb·F) 0.61
	kJ/kg·K 2.55
Heat of vaporization, at b.p., cal/g	81
	Btu/lb 146
	kJ/kg 340
Refractive index, n <sub>D</sub> <sup>25</sup>	1.157
Surface tension, at b.p.,	
	dyn/cm (mN/m) 8.6
Dielectric constant, 0 C (32 F)	83.6
Conductivity, 0 C (32 F), mhos/cm	<1.6 × 10 <sup>-6</sup>
S/m	<1.6 × 10 <sup>-4</sup>

**NOTICE:** Hydrofluoric acid liquid and vapor are extremely hazardous and cause severe burns to the skin, eyes and mucous membranes. The effects may not be immediately painful or visible. See PERSONAL SAFETY AND FIRST AID on page 2.

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## SPECIFICATIONS AND TYPICAL ANALYSES DU PONT HYDROFLUORIC ACID, TECHNICAL

	Anhydrous HF		HF-70%	
	Specifi- cations	Typical Analyses*	Specifi- cations	Typical Analyses*
Hydrofluoric acid, (HF), wt %	99.9 min	99.98	70.0 min	71.25
Fluosilicic acid, (H <sub>2</sub> SiF <sub>6</sub> ), wt %	0.05 max	0.009	0.02 max	0.005
Nonvolatile acidity as H <sub>2</sub> SO <sub>4</sub> , wt %	0.005 max	0.001	—	—
Sulfuric acid, (H <sub>2</sub> SO <sub>4</sub> ), wt %	—	—	0.02 max	0.009
Sulfur dioxide, (SO <sub>2</sub> ), wt %	0.01 max	0.003	—	—
Water, (H <sub>2</sub> O), wt %	0.05 max	0.002	—	—
Color	—	water white	—	water white

\* These columns show typical properties based on historical production performance. Du Pont does not make any express or implied warranty that these products will continue to have these typical properties.

### CHEMICAL PROPERTIES

Hydrofluoric acid reacts with metals above hydrogen in the Electromotive Series of the Metals to form fluoride salts. It also reacts with metal carbonates, oxides and hydroxides.

Silicon tetrafluoride and fluosilicic acid are formed when hydrofluoric acid reacts with silica or silicic acid. Hydrofluoric acid attacks glassware. Aqueous solutions of HF are best handled in the laboratory using polyethylene or polypropylene containers. Use Teflon® or low carbon steel containers for AHF.

Anhydrous hydrogen fluoride reacts with olefins to give organic fluorides and with halogenated organic compounds to give fluorinated organic compounds. AHF forms stable complexes with metal fluorides. AHF also acts as a catalyst in reactions involving the formation of carbon-carbon bonds.

Hydrofluoric acid evolves considerable heat upon dilution with water, and cooling may be necessary for preparation of solutions.

Hydrogen fluoride forms a constant boiling mixture with water at 38.2 weight percent and 112.2 C (234 F).

### USES

#### Anhydrous hydrofluoric acid (AHF)

- Manufacture of fluorinated hydrocarbons used as refrigerants, propellants, solvents and monomers
- Production of inorganic fluorides such as aluminum fluoride, synthetic cryolite, sodium fluoride and fluoroborates, fluosilicates and fluosulfonic acid
- Catalyst for alkylation, disproportionation, isomerization, transalkylation, condensation, polymerization and dehydration reactions
- Manufacture of fluorine and perfluoro acids and their derivatives

- Refining of uranium, tantalum, beryllium and other specialty metals
- Preparation of aqueous hydrofluoric acid
- Fluorinating agent and reaction medium in organic reactions

#### Aqueous hydrofluoric acid-70% (HF-70%)

- Pickling agent for stainless and other heat resistant steels
- Cleaning sand castings and removing silaceous scales from cast iron and steel products
- Component with other acids and oxidizers in cleaning solutions for removal of oxide coatings from non-ferrous metals and alloys
- Chemical milling of non-ferrous metal parts constructed of aluminum, titanium, tantalum and beryllium
- Treating ores and refining specialty metals
- Manufacture of inorganic fluorides
- Etching, frosting and polishing glass surfaces

### PERSONAL SAFETY AND FIRST AID

The hazardous nature of hydrofluoric acid requires that supervisors and operators be carefully selected, trained and drilled. In any operations involving HF, all operating and maintenance personnel should become thoroughly familiar with the hazards and the safeguards necessary to minimize the risk of injury. Essential information for the safe handling and use of hydrofluoric acid is covered in Chemical Safety Data Sheet SD-25 published by MCA.<sup>a</sup> Recommended respiratory protection guidelines are given in Chapter I, Section 4 of the NIOSH criteria document on "Occupational Exposure to Hydrogen Fluoride".<sup>b</sup>

#### Health Hazards

Liquid anhydrous hydrofluoric acid (AHF) causes immediate and serious burns to any part of the body on contact. Hydrofluoric acid 70% (HF-70%) and dilute aqueous solutions of HF cause severe burns of the skin, eyes and mucous membranes. The burns from dilute HF solutions and low concentrations of vapor may not be immediately painful or visible. Several hours may pass before the solution penetrates the skin sufficiently to cause redness or a burning sensation.

Wearing clothing (including leather shoes and gloves) which may have absorbed small amounts of hydrofluoric acid can result in painful delayed effects.

Hydrogen fluoride vapor causes burns. The effects may not become apparent until a few hours after exposure. Inhaling the vapor in high concentrations causes lung damage (pulmonary edema).

<sup>a</sup> Manufacturing Chemists Association, 1825 Connecticut Avenue, Washington DC 20029, (202)-483-6126.

<sup>b</sup> U.S. Dept. of Health, Education, and Welfare, National Institute for Occupational Safety and Health, HEW Publication No. (NIOSH) 76-143, March, 1976.